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ARCHAEOLOGICAL EXPLORATIONS IN PERU

PART IV

CAÑETE VALLEY

BY

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22 Plates

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FIRST MARSHALL FIELD ARCHAEOLOGICAL EXPEDITION TO PERU

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<sup>1</sup> The Museum catalogue number proper is of six figures, beginning with either 169 or 170. Prefixed to this, for convenient orientation, is a letter, such as A, B, NNE, indicating the sub-site or cemetery, usually followed by the number of the grave in which the specimen was found. Thus NE20-170268 means that the catalogue number of the specimen is 170268 and that it was found in grave 20 of the Cerro del Oro cemetery designated as NE. Cemeteries A, B, C, D, E, F were excavated by Kroeber, NE, NNE, SE, S by Hurtado.

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## PREFACE

This paper is a third report on my expeditions to Peru for Field Museum of Natural History in 1925 and 1926. The first two dealt with the Northern Coast. The present report deals with Cañete Valley, some 80 miles or 130 kilometers south of Lima. Cañete is an important valley, by no means deficient in imposing ruins, but has been very largely overlooked by archaeologists.

My work there was conducted during April and May of 1925; at first in person, at Cerro Azul and Cerro del Oro; and later through a joint expedition of Field Museum and the University of San Marcos, Lima, of whose Archaeological Museum Dr. J. C. Tello had charge. This joint expedition was in charge of Sr. Antonio Hurtado, who continued, with my crew of workmen, the excavations which I had begun on the Cerro del Oro. The collections were divided between the two institutions so that the contents of each tomb remained intact.



# ARCHAEOLOGICAL EXPLORATIONS IN PERU

## PART IV

### CAÑETE VALLEY

#### I. AREA, SITES, AND CULTURES

Cañete is a large valley as Peruvian coastal valleys go, but contains no town of much consequence. The Cañete River has a large catchment basin, whose head meets that of the Rimac, the stream that waters the valley of Lima. The intervening streams all head lower in the mountains and have a very much smaller flow. The intervening valleys therefore contain much less irrigable land than either Lima or Cañete. In fact, the Cañete is the largest Peruvian river, in point of average run-off, south of the Santa. The next adjoining valleys south of Cañete, namely, Chinchá, Pisco, Ica, and Rio Grande (Nazca), are traversed by smaller streams, and, although better known archaeologically, may have sustained no larger population.<sup>1</sup>

The Cañete River maintains a considerable flow to its mouth at all seasons. With the heavy rains of the beginning of 1925, the one bridge across it was washed away, and a number of weeks elapsed before the current had subsided sufficiently that automobiles could be dragged across a ford by oxen.

There are a number of well-known groups of ruins in Cañete Valley, such as Cancharí, Hungará and Hervay; and, farther upstream, above the coastal valley proper, Lunahuaná.

While I visited several of these, my work was done at two sites, Cerro Azul or "Blue Hill," and Cerro del Oro or "Gold Hill."

The former is an imposing cluster of pyramidal ruins set immediately back of the modern port of Cerro Azul, the harbor of the valley. These ruins are fitted into a pocket of desert hills and are not visible from the harbor nor from the cultivated lands to the south and inland. They have been much dug over superficially, but apparently the yield of treasure was small, since there is no large-scale destruction of monuments. So far as my observations go, there is only one culture represented at Cerro Azul, this belonging to the Late period, more or less synchronous with the Inca dominion, though no doubt partly antedating it. This Late Cañete culture is very similar to the Late Chinchá culture described by Uhle, Strong, and myself.<sup>2</sup>

The Cerro del Oro is a nearly free-standing hill about four kilometers inland from Cerro Azul. It is connected at the northeast by a low saddle with hills beyond; but on all other sides it is surrounded by ditches and cultivated lands. A fraction of a kilometer to the southeast of the hill stands the town of San Luis, or old Cañete, which may represent the

<sup>1</sup> The exact figures are compiled in No. 2 of this volume, p. 76, 1930. The annual run-off in millions of cubic meters is: Santa, 5,100 (catchment basin, 11,500 km.<sup>2</sup>); Cañete, 2,200 (5,200 km.<sup>2</sup>); Pativilca, 1,600; Huaura, 900 (3,400 km.<sup>2</sup>); Pisco, 900 (4,300 km.<sup>2</sup>); Rimac, 900 (2,500 km.<sup>2</sup>); Chancay, 600 (2,200 km.<sup>2</sup>); Mala, 500 (1,800 km.<sup>2</sup>); Chinchá, 400 (2,200 km.<sup>2</sup>); Ica, 300 (1,500 km.<sup>2</sup>). The areas irrigated, of course, depend as much on the conformation of the land as on the volume of the stream, and thus correlate imperfectly. In hectares irrigated, Ica, with the smallest stream of those considered, heads the list: 20,000. Then follow Rimac, 18,000 hectares; Cañete, 14,000; Chinchá, 14,000; Pativilca, 12,000; Pisco, Huaura, and Chancay, 10,000 each; Santa, 5,000; Mala, 4,000. In general, the northerly valleys have the larger streams, the southerly ones more land that is easily brought under water. Roughly, coastal population size may be estimated as proportionate to irrigable area, especially in prehistoric times. By this gauge, Lima, Cañete, and Chinchá would have been the most populous valleys between Chicama and Ica.

<sup>2</sup> Univ. Calif. Publ. Amer. Arch. Ethn., vol. 21, Nos. 1, 2, pp. 1-94, 1924.

site of an ancient settlement whose inhabitants used the hill for their cemeteries. The hill itself contains no remains of non-funerary structures of any note; nor are there pyramids or other buildings of consequence in the immediate vicinity.

Two cultures are represented in the many thousands of burials that have been made on the Cerro del Oro. One is the Late Cañete or Late Chíncha culture just mentioned as occurring at Cerro Azul. The other is an earlier culture which I have provisionally called Middle Cañete. It is the earlier of the two by its stylistic affiliations. Also, I succeeded in finding a stratification in which Middle Cañete burials were overlain by Late Cañete grave material. As a stratification this was not a very impressive example, but, as I have previously pointed out, thoroughly good stratifications are either unusually rare in Peru or very difficult to discover.

The Middle Cañete culture is characterized by skulls deformed fronto-occipitally; structures of small cubical hand-made adobes; a scarcity of metal; and by pottery and textiles which show some Nazca influence, but no direct Tiahuanaco influence. The Nazca elements in the pottery are all of Late Nazca type. They are what Gayton and I have called the Nazca Y phase of that<sup>1</sup> culture, but without the Tiahuanaco element which in the Valley of Nazca itself is found in association with Nazca Y remains. On the other hand, there are occasional traits of Middle Cañete pottery, both in design and shape, which suggest or anticipate later Peruvian styles of the coast; Late Ica especially.

The place of the culture in the Peruvian time scale is, therefore, not one which I should wish to fix with much positiveness—it looks both post-Early and pre-Late. This is the general era of Tiahuanaco elements on the coast; but the absence of these at Cañete, at any rate in the materials so far known, prevents a precise, positive chronological tie-up with other Middle period cultures of the central and southern coast.

It may be that search farther upstream, as at Lunahuaná, will reveal the intrusion of highland influences in Cañete, as in nearly all other coastal valleys. Even if so, however, it is rather remarkable that the culture which I encountered on the Cerro del Oro should be so free from evidence of highland influences. Evidently this influence established itself in quite different degrees of strength in different coastal valleys.

I ought to add that the Middle Cañete culture is not merely a mixture of terminal Early elements and anticipations of Late ones, but contains a series of distinctive stylistic traits peculiar to itself.

<sup>1</sup> Univ. Calif. Publ. Amer. Arch. Ethn., vol. 24, No. 1, pp. 1-46, 1927; see especially pp. 26-33, Plates 12-17.



## II. CERRO DEL ORO: MIDDLE CAÑETE CULTURE

### THE HILL AND ITS STRUCTURES

Apparently the Middle Cañete people covered nearly every part of the surface of the Cerro del Oro with their cemeteries. These consist of series of terraces rising up the slope of the hill, the terraces being held back by walls of adobes. Frequently there are several walls on nearly the same level. Occasionally, transverse walls were added and building carried a few meters higher, resulting in low, flat-topped pyramidal structures about the size of a small house or large room.

At a subsequent time the people of the Late Cañete-Chincha culture used part of the hill for their cemeteries. They concentrated especially on the southeastern slope, the one that overlooks the town of San Luis. Here they constructed a large walled cemetery, and buried not only within it but over considerable stretches on both sides and below.

These Late cemeteries have been almost completely sacked. The ground has been thoroughly torn up and is still pitted with what look like shell-holes. This work would not have been performed except in the hunt for silver and gold, and would not have been as thorough as it was unless the yield had been encouraging. It may be assumed, therefore, that the hill derives its name from the exploitation of these Late cemeteries.

Over other parts of the cerro, where Late graves are few, there has been less plundering, and whole series of intact Middle Cañete tombs are not difficult to find. Because of the lack of precious metal the treasure hunters have not been tempted.

That this is the outline of the story of the use of the hill is indicated by two facts. First, practically all tombs or other structures on the hill, whether Middle or Late, are built of the small cubical hand-made adobes. Such adobes are definitely associated elsewhere, as in Lima Valley, with the Middle period of Peruvian prehistory, and are not known to have been used in Late structures anywhere on the coast from Lima to Nazca. It looks, therefore, as if the Late Cañete people had mainly destroyed Middle period tombs and built their own out of the materials of their predecessors. In this way the fact is also accounted for that the débris in and about the churned-up soil of the walled Late cemetery contains a minor percentage of characteristic Middle type sherds. By contrast, the surface débris on other sides of the hill, such as the northeastern, which is overwhelmingly of Middle period type, contains a minor scattering mixture of Late fragments, due no doubt to the intrusion here and there of Late period graves.

I do not know of an available map of the Cerro del Oro. Neither Hurtado nor I was equipped for mapping even of an approximate kind. We independently sketched the outline of the hill from having walked over its parts many times. The two maps as brought together in Plate LXIX, Figs. 1 and 2, show no great degree of correspondence, I must admit. However, my sketch is avowedly only diagrammatic. Most of my excavations were made on the higher, gentle slopes, and I disregarded the numerous quebradas or gullies at the foot, noting only a few which were of significance with reference to my excavations. Hurtado, on the other hand, noted the indentations in the perimeter of the hill, and perhaps exaggerated them. Allowing for this difference, our two maps probably vary mostly in that the relation of length and breadth of the hill is inverse. As regards this ratio of the length and breadth diameters, I feel that my sketch is probably more nearly accurate than his, just as his is superior in giving the actual course of the outline.

In any event, part way up the hill the slope in general becomes gentler, and a considerable area on top is almost level. In the center of this level area stands a small ruin (R) with considerable of its walls still intact. This is the only conspicuous building on the hill, and is rather small at that.

More or less to its west, near the head of the gully which has eaten from the north or northwest up into the level top of the hill, is another ruin, which is a pyramidal rather than a walled structure. This has been trenched through. Down the same gully a little distance are retaining walls (B), more or less crumbled. These seem to constitute the front of small pyramids or terraces facing the gully.

On the opposite southern or southeastern side of the hill, two gullies which enter its outline contain Chinese cemeteries. The more easterly, near the Hacienda Casa Blanca, is that of the "esclavos" or indentured coolies brought to Peru in the earlier part of the nineteenth century. The other, more westerly and toward San Luis, is that of the more modern Chinese. At the edge of the latter stands a crag against which a flat-topped pyramid or terrace has been built (D).

### LATE CEMETERIES

Other ruins or traces of ruins occur on various parts of the hill, but none of them are of much moment except for a large walled cemetery (WC). This walled cemetery was evidently constructed and certainly used by the people of the Late or Chíncha culture. It is on the southwestern half of the hill, on the side directly overlooking San Luis. The quadrangular enclosure I estimated at about 400 x 250 feet, or say 125 x 75 meters, the long axis corresponding with the long axis of the hill. On the two northerly sides the enclosing wall is double, with a sort of street between. This sort of street is found in Late constructions at places as far separated as Pachacamac, Armatambo in Lima Valley, and Chanchán in the north. The southeastern and southwestern walls are single.

In spite of some evidence of crumbling at the top of the enclosing walls of this cemetery, 45 courses of adobes can still be counted, in places, from the present top to the beginning of the talus at the foot of the wall. This exposed wall-face I estimated at about 5 meters high at the maximum point. This figure corresponds well with the size of the adobes, which I calculated to average about 9 cm. in thickness. With 2 cm. additional allowed for mud mortar in each course, the 45 courses would aggregate close to 5 meters. If to these 5 meters are added allowances for the foot of the wall now covered by talus, and for loss through crumbling at the top, the original height of the enclosing free-standing wall may be estimated at around 7 meters.

In the north corner of this quadrangle are some large rocks which apparently interfered with burials. All the remainder of the quadrangle must have been densely filled with burials, enough of which contained precious metals to make the thorough sacking of the cemetery profitable. The largest excavation pits are about 5 meters deep and 10 meters or more in diameter, and there are more which measure 3 meters in depth and 5-7 meters across. Among the churned soil and adobes from the tombs is a mass of cultural *débris*: abundance of white cloth from body wrappings, and sherds, mostly of a rough red ware; but, as will be shown, plain red or plain black ware is characteristic of the Cañete form of Late Chíncha culture. Coarse white cotton cloth wrappings are characteristic of Late burials all along the Peruvian coast.

The skulls that lie about this plundered cemetery are nearly all natural in shape; that is, undeformed, except perhaps for minor unintentional flattening of the occiput. This trait again is characteristic of the Late period on the coast.

Some of these skulls show another trait which is widespread in the Late period: green stains around the jaws or occasionally about the ears. This green stain is the result of copper or sometimes silver ornaments attached to the head. Most frequently a thin disk or small sheet of the metal appears to have been put into the mouth of the corpse, the stain, therefore, being strongest on the inner side of the jaws and palate. Along the entire coast, so far as I know it, these green stains on skulls are a convenient and almost invulnerable criterion of lateness. They are especially convenient because treasure hunters and even pot hunters invariably throw out bones, unpainted pottery, and unpatterned cloth. Undecorated cloth and pottery fragments are often difficult to identify with positiveness as to period; but skulls last longer on the surface than other bones, and the stains frequently suffice to tell the tale of cultural age.

This walled cemetery also contains some sherds characteristic of the Middle Cañete culture. These, however, constitute only a minute fraction of the total. They suggest that this part of the hill contained a certain number of Middle period burials, which were broken up when the Late people founded their more ambitious graveyard.

The walled cemetery is only part of an area of Late or Chincha burials. These extend both downhill from the enclosure and to its left as one stands looking down on the town of San Luis; in other words, in a general easterly direction from the enclosure more or less to the foot of the hill. This entire area I have called site C.

More or less on a level with the walled enclosure in the unenclosed part of the C area are about five terraces. The retaining wall of the highest of these terraces rises flush with the almost level natural top of the hill. Above this there appear to be no burials; they begin at its foot and continue through the lower terraces. Here also there are enormous excavation pits, and the same type of surface débris shows, although the sacking appears to have been less complete than within the enclosure, with the result that an undisturbed burial can still be found here and there.

Site D is really nothing more than the eastern end of the area which I have designated as C, namely, the portion of it which lies close to the truncated pyramidal ruin by the modern Chinese cemetery. Here I succeeded in finding one or two Middle period graves. Apparently the disturbances by Late grave diggers and subsequent Caucasian treasure hunters were less on this periphery than over most of the C area.

The area of Late graves continues westward from the walled cemetery, or to the right as one looks down from the hill, toward or even beyond the end of the long axis of the cerro. This area I have called site F. Here there are mainly low walls, now buried, which formed terraces of small elevation. In this F area, Late burials are most in evidence, but Middle burials also occur. It was in this site that the one stratification occurred which I was able to discover. Plate LXXVIII, Fig. 4, sketches this stratification. The Middle period graves were rather shallow; the Late interments seem not to have been vertically above them but somewhat uphill, even more shallow, and without walling of the tombs. Evidently with the slow denudation of the surface of the hill some of the Late interments gradually slid somewhat downhill, until the one I discovered lay directly over Middle period tomb F-28 (Plate LXXVIII, Fig. 4). The overlying Late material was neither intact nor plundered; it had quite evidently slipped or worked down the slope a certain distance without disturbance by human agencies.

I admit that this is the sort of stratification about which one is more inclined to feel apologetic than proud. However, I can only repeat that clean-cut stratifications either are very rare in Peru or we have not yet learned how to look for them. Obviously a stratification of graves is likely to be less convincing than a stratification due to the accumulation

of rubbish. There is plenty of the latter in Peru; every workman recognizes *basura* (refuse). But, in almost all instances, the rubbish appears to have been carried and dumped as fill where it is found. Moving and piling up quantities of earth in the form either of solid masses of adobe bricks, or of adobe walls containing loose fill, appears to have been one of the prevailing occupations of the ancient Peruvians; at any rate, those of the coast. This habit makes the task of the modern archaeologist no lighter, and is one of the causes of our having laboriously to reconstruct the sequence of cultural events by inference, instead of being able to point with satisfaction to a neat, clean, ready-made stratification.

### MIDDLE PERIOD CEMETERIES AND TOMBS

On the whole, the parts of the hill which prove most productive of Middle period remains are those on its northeastern half; that is to say, the rather gradual slope from the central level area toward the end of the cerro which is more or less connected with the hills to the east and north.

This general Middle period area I have called A, and it includes Hurtado's NE and NNE sites. Here there extends a long series of walls more or less parallel to one another, and horizontal, that is, transverse, to the slope of the hill. Some of these walls project slightly above the surface, others are entirely covered, and some buried several meters deep. How far the walls were below the surface when they were constructed, or how far they have been subsequently covered by decay of the surface, I found it hard to decide. Mainly it would seem that they were originally sunk into the ground; but they are probably more covered now than when they were built. In a broad sense, these series of walls may be construed as retaining walls for terraces in which burials were made. However, this description can be accepted only with reservations.

The general effect of the surface in this A area is that of a series of low and much denuded terraces, but the parallel walls are sometimes only a meter or two apart, and occasionally two or more walls are in actual contact. Here and there cross-walls appear, and the walls as a whole do not form a regular or connected system. They vary from 2 or 3 to more than 10 meters in length, with gaps between their ends as irregular as the spaces between parallel walls. Here and there the cross-walls are better developed, and the result is a small truncated pyramid or cubical walled space, mostly or wholly underground.

In general, the purpose of the walls seems to have been to serve as a basis for the construction of tombs. Most frequently, these tombs are built against the wall, at its foot. Sometimes they form a niche or recess in the wall, or occasionally are entirely within it.

The Middle period tombs are built of the usual adobes. Their floor size varies from about 30 x 30 cm. to 100 x 150 cm. or even larger. The interior height is normally not far from 60 cm.; in other words, sufficient to accommodate a seated, crouching body, with the head pushed between the knees. Children's tombs may be lower; they are often smaller.

The occasional large tombs are from 80 to 110 cm. high, with one found rising to 140 cm. The ordinary tomb is not far from cubical. The depth of the grave, as measured from the surface of the ground to its *roof*, ranges from a fraction of a meter to nearly 3 meters; but most frequently it is in the vicinity of a meter or a little more. (In the tables, depth is the distance from the *tomb floor* to the surface.) The tombs are, therefore, neither very deep nor difficult to reach. Their approximate location is often indicated, after a little experience, by the surface contours, which indicate the tops of walls. Hurtado was more meticulous than I in consistently designating tomb measurements, and I therefore list his figures in condensed form in Appendix III.

That so many of the tombs remain undisturbed is evidently due to the fact that trial soon showed that they contained no metal, in fact, usually not even showy pottery vessels.

The roofing of the tombs is peculiar. Not uncommonly the roof consists of the same small cubical adobes of which the walls are built. These roof bricks are simply joined with mud mortar, like a pavement, except that they hang free, with soil above them. In some cases the roof has been crushed in, in others it remains intact. This means, of course, that the mortar acted as a kind of cement, binding all the adobes of the roof into a monolith. This must have been allowed to dry out firmly before the tomb was recovered with soil. Obviously this construction would not be strong enough to support its own weight, let alone that of superimposed fill, over any large span. It was generally used without further reinforcement only where the smaller diameter of the tomb could be kept down to 60 or 70 cm.

For instance, tomb A-16 of my own excavating had an interior floor area of 110 x 80 cm. (Plate LXXVIII, Fig. 3). The walls were built up 80 cm. high, all of adobes except for the front wall, which was adobes mixed with stones. Across the breadth was laid a beam somewhat in front of the middle of the length of the chamber. From this beam forward, the roof was of stone slabs. From the roof to the surface of the ground was 110 cm. On the tomb's small floor area of less than a square meter were set six bodies, as shown in the illustration. None of these had the head bent down between the knees. This appears to be the reason for the above-average height of this tomb interior.

Another roofing method occasionally used was to arch the outer wall over the tomb until it met the heavier retaining wall against which the tomb was built. The roof, therefore, forms a half vault. Hurtado and I each encountered a case of this kind (Plate LXXVIII, Fig. 2). There is no question of an approach to a true arch: the roof span is not supported by the shape or placing of the blocks so much as by the mortar tying it into a unit. At that, this type of roof, curve-sloping instead of level, and leaned against a higher and larger wall, would presumably resist pressure from above better than the more frequent flat roof.

Three of the largest tombs discovered by Hurtado are described by him as having gabled roofs. These are NE-12, NE-18, and NE-20. In this case the width ranged from 75 to 100 cm., and the roof was formed of adobe slabs approximately half a meter long and from one-fourth to one-third meter wide (exact figures in Appendix III). Hurtado's notes do not mention a wooden ridge-pole, so I assume that the two rows of adobe slabs were leaned up against each other like pairs of cards in a card-house.

The size of the Middle period tomb seems to have had little relation to the number of bodies it contained. Hurtado's three large gabled tombs each contained only one body, except that his NE-18 also held body 19, that of a child, in a niche. He also described his bodies NE-2 and 3 as found in one recess; otherwise, in 38 cases, he discovered one mummy to one tomb. My seven small tombs at site F also contained only one body each. However, 21 tombs opened by me in area A (which includes Hurtado's NE and NNE) contained 37 bodies or parts of bodies. The distribution of these is shown in Appendix II.

As for massive retaining walls, as distinct from tomb walls, Hurtado's measurements of several groups of these are also given in Appendix III. His figures correspond with my observations and more scattered measurements. The most significant feature is undoubtedly the randomness of height, thickness, and disposition of walls. A higher wall may be thicker, but it also may be thinner. Parallel walls, evidently belonging to the same system, may be in contact or more than 3 meters apart; their length may be equal or different. These retaining or terracing or boundary walls within the cemetery are generally 4 or 5 bricks of adobe in thickness; but this number also varies. The ordinary tomb wall consists mostly of a single thickness of brick.

The cubical adobes of the Cerro del Oro I estimated to average 12x9x9 cm. This is about halfway between the sizes which Hurtado reported as most frequent, i.e., 14x14x10 and 10x10x7.5. Some other of his figures are given in Appendix III. It will be seen that mostly he gives two dimensions the same, and the third smaller; whereas my generalized observation made the third dimension larger than the two equal ones. This difference shows the desirability of recording actual measurements on a sufficiently large series of samples, rather than near-estimates or impressions. However, the bricks are more irregular than measurements would indicate, their surfaces being uneven.

The adobes are not only made by hand but roughly made. In spite of their consistent approximation to a near-cubical form, they are really not very far removed from Uhle's "fist-lump" adobes as he encountered them at Chíncha and Pisco. They do not regularly taper, as do many of the sub-conical adobes in Nazca (Tello's odontiform). But if one end of the Cañete brick is smaller by reason of slovenly manufacture—and this frequently happens—the small end is laid inside the wall. The bricks are smaller than the Proto-Lima (better, Middle Lima) bricks at Aramburú. I noted specifically that they are square as seen from the end, in contrast with those at Aramburú. This observation corresponds with my memorandum of average proportions of around 12x9x9 cm. for the Cañete adobes.

In any event, however rough their form, the texture of the adobes is excellent. They are hard and difficult to break. This rather fits in with the suggestion already advanced that the Late or Chíncha population to considerable extent re-used adobes made in Middle Cañete times. The laying of the adobes is good enough, considering the irregularity of size and form. Obviously they had to be embedded in considerable quantities of mortar to take up the unevenness; equally obviously, the thickness of the mortar between bricks is also variable. This mortar, as usual in coastal Peru, is nothing but mud of the same clayey soil of which the adobes have been made by previous drying in the sun.

## MIDDLE CAÑETE POTTERY

### STANDARD FORMS

It seems best first to describe the several types of Middle Cañete pottery, and then to discuss their relations to other Peruvian cultures.

*Conical Sieves.*—Plate LXX, Fig. 1, is an example of this type, which, so far as I know, is new to Peruvian archaeology. The specimen shown is 22 cm. high and 13.5 cm. in diameter. The upper edge is turned in an inward lip. The outer rim is painted black, or rather dark reddish brown. The walls are thin. The perforations, which were evidently made with a spine, needle, or straw, have been carefully smoothed or pushed-through clay on the inside. The pricking instrument appears not to have followed any very regular course. The unbaked vessel was evidently set with its pointed end up: the prod of the punch was then directed downward. The perforating evidently began at the top, a couple of centimeters from the point; the rows of holes mostly follow vertical lines, though these are by no means straight. When the perforations had been carried over most of the surface which was to remain unpainted red, three horizontal rows of holes were punched.

While these sieves are not exactly abundant, they occur with fair frequency. Besides the one figured, which was excavated by Hurtado, I found two in graves, 169662 in A-10 and 169673 in A-6. Many fragments were also found on the surface and in débris. All these indicate identical shape and banding, except that one fragment, included in 169819, has four narrow stripes of black instead of a single band. Apart from the thickened angle at the rim, the ware varies from about 2 to 4.5 mm. in thickness. The holes are from 2 to 8 mm. apart between centers. Where the holes are small they are usually also close, and sometimes



arranged in regular rows horizontally and vertically. Larger holes are spaced more widely apart. Some of the fragments are thoroughly smoothed inside as well as out; these are usually pieces with many and fine holes. Others are not smoothed on the interior, each perforation remaining surrounded with the little rim of clay that has been pushed through. Such roughness as has been allowed to remain is always on the inside. Also, the punching strokes seem invariably to have been slanted downward from the outside, as the vessel sat on its rim.

It is clear that these cones would hardly have served adequately to sift anything solid, but that they were used for straining water or *chicha*. Sprinkling is also a possibility, but hardly probable: on trial, the cone fails to scatter water. At any rate, a ritual use is suggested. This agrees with the limited geographical distribution of the form. A chiefly utilitarian vessel would hardly have remained confined to a single valley.<sup>1</sup>

*Low Bowls with Foot.*—I secured four low, footed bowls: in F-20, F-21, F-28, F-30; and Hurtado found one each in NNE-10 and S-6. There are also many fragments of feet. The variation in shape and painted design is shown in Plate LXXI, Figs. 1-4, 6. Three of these are painted with red and black on the whitish outer surface; one has merely a black rim, like the conical sieve; and the fifth is uncolored, except for a red slip somewhat darker than the pale red of the body of the vessel. The outer wall ranges from vertical to well incurved. Fig. 6 is somewhat aberrant, in that the side wall is virtually reduced to an incurved lip, but the bottom rises more than in the others. The size ranges from 15 to 25 cm. in diameter; the height from 4 to 8 cm. The foot varies less than the bowl. It runs pretty uniformly from 7 to 8 cm. in diameter, more rarely up to 9. Its height is from 0.5 to 1 cm.

When these bowls are painted, it is with rather small designs; mostly not especially reminiscent of any one Peruvian pottery style.

However, the shapes definitely recall the style of Middle and Late Ica, especially the latter, in general flatness, sharpness of angle, and vertical or incurved rim.

*Low Bowls without Foot.*—These are about as numerous as the footed specimens, but usually smaller; ranging from about 10 to 20 cm. across. The walls may be vertical or rounded inward: Plate LXXI, Figs. 5, 7. A design is applied or omitted about as often as in the footed bowls. The plain samples are likely to have the inner side washed with dark red or purplish brown. Rim fragments can usually not be distinguished as coming from bowls with or without foot.

*Plates or Cumbrous Bowls.*—This is a typical Middle Cañete form, ranging from a shallow flaring bowl which is almost a plate to more massive and deeper ones, which, however, also flare into a gradual curve. The former have a diameter four or five times that of the depth; the latter, three times; but the two extremes intergrade. The ground color is red, the design generally black; sometimes also white. The black may be replaced by a purplish metallic maroon. Occasionally the inside of a plate is simply washed over with this purple (Plate LXXII).

In graves these plates are sometimes set on the floor of the tomb, but frequently one of them has been laid inverted over the mummy's head, like a hat.

In general type of shape and design these low bowls or plates obviously are related to the type which Kelly has described as "cumbrous bowls."<sup>2</sup> They are, it is true, less heavy than most Peruvian cumbrous bowls, and in their extreme form they are shallower. Their

<sup>1</sup> I found a small fragment of one of these sieves (169883) in Mala, the second valley north of Cañete, in one of several great heaps of débris near the buildings of Hacienda Salitre. This is the most northerly specimen known to me which can be connected with the Middle Cañete culture.

<sup>2</sup> Univ. Calif. Publ. Amer. Arch. Ethn., vol. 24, No. 6, pp. 325-341, 1930. Cf. Figs. 67-70 for Cañete.

designs are also related to those of typical cumbrous bowls, especially in the use of segments or arcs and stepped triangle figures along the rim. The Middle Cañete bowls, however, go farther in this design, in that the main area between two opposite segment or arc figures is filled with stripes parallel to the segments; thus, Plate LXXII, Figs. 3, 5, 7. This tendency toward parallel striping is perhaps their most characteristic design feature.

A few of the bowls thicken toward the top, and then bevel off toward the edge. Such are Figs. 1 and 2. It will be seen that in these cases the design is confined to the annular rim bevel. Fig. 4 shows a related pattern, but without thickening or bevel. Fig. 6 also restricts the design to the rim; in this case there is no relationship to the beveled pieces.

Kelly's finding is to the effect that Peruvian vessels of this type, whenever their period is known or can be inferred from definite stylistic resemblances, are of Tiahuanacoid or later time, but in no case yet discovered earlier. The Cañete plate-bowls are sufficiently similar to the cumbrous ones from elsewhere to make it seem highly probable that the Middle Cañete culture to which they belong cannot well be much earlier than Tiahuanaco. On the other hand, Kelly has also shown that the general type persisted in some areas, such as Ica and Nazca, with relatively little change from Tiahuanaco to Incaic times. Consequently, the Cañete bowls do not necessarily limit the culture to Tiahuanaco (medieval Peruvian) time.

*Small-mouthed Jars.*—These were found occasionally, and in two sizes. The larger ones are from 30 to 35 cm. in height, nearly as much in diameter, and with a mouth generally under 10 cm. across. The mouth rises from 3 to 5 cm. and is usually vertical walled, although one specimen shows a slight flare. The greatest diameter of the body is usually somewhere above its middle. The flat base varies from a third to half of the greatest diameter. All these larger jars are of the usual red ware with a design covering more or less the upper half. Figs. 3 and 4 of Plate LXXIV seem typical (the face of the latter has the nose molded, the other features merely painted). Plate LXXIX, Fig. 1, is like this last, except that the whole upper part of the vessel is slipped in maroon purple and on this are painted four double spirals, two in chalky white, two in yellowish or greenish white, similar to the one spiral in Plate LXXIV, Fig. 4, but smaller.

Small jars are represented by Plate LXXIV, Figs. 1, 2. These are about half as high as the large jars and of generally similar proportions, except that the vertical neck is relatively higher. Of the two pieces illustrated, the first is slipped, except around the base, with dark purple. Six crude eight-pointed flowers or stars are painted in white on as many bosses. Seen from the top, the vessel is more hexagonal than the drawing would indicate. The other jar of this pair has its upper half slipped with white. On this the design is painted in deep purple bordered with black—on the front only. The rear half is white. The neck is slipped purple, but with a pigment applied more densely, so that the effect tends toward black, whereas the purple in the pattern is more reddish, as the draftsman has shown it. The design looks like a fragment or derivative from the interlocking fish pattern of later Early Nazca. The paneling of the pattern is a trait that in general is characteristic of Peruvian styles which have come under Tiahuanaco influence.

*Miniature Jars.*—Plates LXXV and LXXVI show four jars of as many shapes, which have little in common, other than the fact that they range only from 8 to 12 cm. in height. Plate LXXVI, Fig. 5, is crudely overpainted in white and is the only Middle Cañete jar with a handle. Plate LXXV, Fig. 3, is evidently a miniature model of the large jars. The paste is yellowish rather than the usual red. The design is black and white. Figures 1 and 2 of Plate LXXV are from one grave, Hurtado's NNE-10. Both are rather crudely made and



painted. Figure 1 has a bird's head projecting from the shoulder, with black and white wings and legs sketchily painted in. Specimen 169669, from tomb A6a, not illustrated, is similar to Plate LXXV, Fig. 3, but only a little more than half as large.

*Bridge-and-spout Jars.*—Something over half a dozen jars with two spouts, or with a single spout connected to a figure by a bridge handle, were found by Hurtado and myself. Five of these that came to Chicago are shown in Plates LXX and LXXIII. Two are spherical or cylindrical, without modeling: Plate LXX, Fig. 2, and Plate LXXIII, Fig. 1. Both are painted with a geometric design in red, white, and black; or, to be more exact, Plate LXX, Fig. 2, has two shades of red, one more purplish.

Plate LXXIII, Fig. 4, has a woman's head and arms modeled on the upper edge of the cylindrical body. She carries on her head a child. From this a bridge handle extends to the spout, which is on the opposite side of the vessel. Evidently the body of the vessel was to be construed as the woman's body, or as the cloak covering it, because her arms emerge out of this, and at the bottom her feet are crudely indicated by painted modeling. The woman's face and arms are painted or tattooed, and the eye is the longitudinal one of late Early Nazca. The whole stylistic concept of the vessel is that of debased Nazca.

The two other vessels of this group are wholly modeled. In Plate LXXIII, Fig. 2, the bird has holes for two spouts, one on each shoulder. The paste is crude and crumbly and about half of the slip has been lost. The painting appears to have been in three colors—red, black, and white. The remnants of red are dark and somewhat purplish; the black is really medium gray.

Plate LXXIII, Fig. 3, shows three fruits, but the stem above their junction has been lost. The two fruits farthest from the stem contain orifices which undoubtedly terminated in spouts. The third fruit, directly under the stem, has no such orifice on top; its connection with the two other fruits is through the bodies and is invisible. This vessel appears to have been washed with red. The only black and white is in small areas below where the stems of the spouts have been broken off.

The bird vessel is typical of Nazca Y style where this comes associated with Epigonal. The triple-fruit jar is also characteristic of late Nazca, though less definitely so. It will be noted that on all the vessels of this class the spouts spread or flare at a considerable angle. In the pure Nazca style, in both its A and B phases, the spouts are cylindrical rather than tapering and parallel rather than spreading. The spread and taper become typical of the last Nazca period, when base Tiahuanaco influence is visible in vessels found in the same graves, or even on the same vessel that is still partly Nazcoid. Where the spouts continued into the post-Tiahuanaco cultures, as in late Chimú, they are also regularly tapering and spreading.

These spouted vessels are strong evidence that the Middle Cañete culture cannot be placed earlier than the terminal Nazca period, when this was becoming infiltrated with Tiahuanaco-Epigonal elements—that is, with highland influence. On the other hand, there is not a single intact vessel from a Cañete tomb which is done in strict or complete Tiahuanaco manner. It looks as if such highland strain as there may be in Middle Cañete pottery had reached Cañete Valley not so much by direct import from the mountains behind the valley as by coming up the coast in the form of Nazca Y-Epigonal hybrid influences.

#### VARIOUS FORMS

*Flat Jars.*—These are represented by a couple of vessels about 12 cm. in diameter, 10 cm. high, and about 8 cm. across the low flaring mouth. Plate LXXV, Fig. 7, shows the one with the most interesting design: viz., conventionalized fishes crudely executed. Plate LXXIX,

Fig. 2, also has a white shoulder. On this are painted nine inverted V's in black, each enclosing a smaller inverted V. The spacing, angles, and thickness of strokes are very irregular. As a matter of fact, there are nine full V's and a tenth has been squeezed into the insufficient remaining space, the smaller V which it should contain being left out. This piece is from the same grave, NE-18, as the miniature jar of Plate LXXV, Fig. 3. The two are alike in that the paste is yellowish buff instead of red. The white and black pigment on both is also of substantial quality, however crude the handling of the brush.

*Miscellaneous.*—A red, black, and white bowl with a flat bottom and flaring but concave sides is shown in Plate LXXV, Fig. 4. The design is painted on in the usual haphazard Middle Cañete manner, but is more pleasing than usual. The entire inside of the bowl, which measures 15 cm. in diameter, is painted with a metallic black or dark gray, through which the red paste shines with a purplish effect.

*Holed Pottery Disks.*—An unexplained type is flat disks or plates with a hole about 5 cm. in diameter in the center. Two of these remain in the collections in Chicago: Nos. 169667 (Plate LXXVI, Fig. 2) from tomb A-6a, and 170260a from tomb NE-18. They are respectively 15 and 16 cm. in diameter and almost flat, the depth of curvature being scarcely 1.5 cm. The ware is rather coarse and thick—from 5 to 8 mm.—and reddish. The first piece has a white slip on the concave side, with the very crude red and black design; the other is simply slipped in white throughout. Both pieces look as though they had been modeled with the hole in place; this is almost certain for the one figured. Their use and purpose is entirely conjectural.

Allied to these are large sherds with one or more holes bored through them. No. 170253 from tomb NE-5 is an irregular fragment of thick gray ware, about 12 x 10 cm. Near the middle is a perforation, and half of another remains at one edge. Tomb NE-20 yielded No. 170270. This is reddish ware from a large jar. The piece has been chopped out with seven or eight blows of an edged implement, and is irregularly polygonal, the largest diameters being about 12 and 14 cm. The central hole, 1.5 cm. in diameter, has been ground or bored out from both sides.

*Tubes.*—In tomb NE-20 there were 25 reddish pottery tubes, closed at one end, unpainted and unfinished on the surface, one of which is shown in Plate LXXVI, Fig. 3. One-half of these objects is now in Lima, the other half in Field Museum. They average about 20 cm. in length and a scant 3 cm. in maximum diameter. The uniformity, however, is rather rough, the longest and shortest pieces differing by fully 2 cm. The upper part of each contains a tubular hole between 1 and 1.5 cm. in diameter. This hole extends the full length of the tube, to where it is closed off at the bottom; but on the outside the objects constrict perceptibly about halfway down. The purpose of these tubes is unknown. They could have held liquids, meal, powder, or feathers, or they may have served as sockets for sticks or handles.

*Pan's Pipe.*—Plate LXXVI, Fig. 6, shows a fragmentary Pan's pipe of pottery, found on site F among Middle Cañete remains, but not in a tomb. The piece has been lost, and I dare not describe color and texture from memory, although I assume it was red and without painted design. The type is an Early Nazca one.

#### FIGURINES

A few pottery figurines and heads were found. They agree in having the narrow almond eye of Nazca B and Y molded heads. The best preserved, 169687, from A-13, is shown in Plate LXX, Fig. 3. The part of the figurine which remains is 11 cm. long. It is flat, only 2.5 cm. in greatest thickness. The head is curved backward in a way not shown in the

drawing. The head is also flat, except for the nose, the eyes being wholly painted on. The pattern appears to represent the design of a garment. The painting is in red, dark reddish brown, and white over a red paste.

Tomb A-5a contained a similar but larger figurine head, 169792, Plate LXX, Fig. 4. This is 5 cm. in breadth. Again there is no modeling, except the prominent nose and a shallow slit for the mouth. In contrast with the last piece, the eyes definitely slant. The face is yellow, the hair and pupils rusty black, the whites of the eyes white. A yellow face is typical of Nazca B and Y female heads (the preceding figurine, however, has the face red). The present head is also flat and curved backward. The fact that it has a finished upper edge rather precludes its having been a handle on a large jar, which otherwise it suggests. This piece is more Nazca-like than the last, not only in color, but in the treatment of the hair and in traces of cheek painting. Inasmuch as only the head was found in the tomb, there can be no absolute certainty that it was manufactured by people of Middle Cañete culture. It may have been found in the ground by them when they dug the tomb, or picked up as a remnant from an earlier occupation of the hill, and included among the grave contents.

The large jar shown in Plate LXXIV, Fig. 4, carries on its neck a Nazca B type head which is all painted, except for the modeled nose. Compare also Plate LXXIII, Fig. 4.

Plate LXXVI, Fig. 1, shows another fragmentary figurine. This is unpainted and was hollow. Unfortunately, the head is lost. This is not from a grave, but from a trial hole in an area of Middle Cañete remains.

#### SHERDS

Plate LXXVII, Figs. 1-3, shows a number of sherds found at spots *x* and *z* of site B; and Fig. 4, sherds from C. The letter B designates an area in and around the head of a gully which extends from the northwest edge of the hill nearly up to the central ruin R. The retaining walls facing this quebrada have been mentioned. There has been considerable fall and slide in the area, and it would require extensive and careful clearing to determine the time relations of walls, tombs, and deposits. Most of the sherds at B are typical Middle Cañete in design. The same also holds for the colors used; the characteristic greenish white and dark maroon appear often. So far as the fragments show vessel shapes, they are also characteristic Cañete. Thus the longitudinal fragments of Fig. 3 are all from low, steep-walled bowls. The same holds for Fig. 1, as regards the two bird designs. The three sherds with triangular heads in Fig. 1 suggest the conventionalized interlocking fish or serpent head, which historically first appears in Nazca B, so far as known; although they seem derivatives, not typical examples, of the pattern. The two uppermost sherds in Fig. 1 come nearer to Nazca ware in quality, especially the left-hand one with the fret which contains a definite gray, and is thin-walled and well polished.

In Fig. 2 the upper right fragment is from the vertical wall of a low flat bowl. The background is greenish white, the ware thin and smooth, the rim at the top well finished. The two other fragments are thick and coarse ware, much more crudely painted. On one the background is greenish white, on the other orange yellow. The design motives suggest decadent Nazca B or Nazca Y.

It would probably be impossible without a painstaking and expensive excavation to determine whether the pottery represented by these sherds dates from a pre-Middle Cañete occupation of site B by a population of terminal Early Nazca period, or is all of Middle Cañete origin with occasional absorptions or carry-overs of Nazca culture elements.

## SIMILARITIES OF THE POTTERY STYLE

Nothing wholly positive emerges from the foregoing as to the place of Middle Cañete in the Peruvian relative time scale. It is quite clear that there is no evidence of classic or pure Tiahuanaco influence. Neither will there probably be much more dissent from the finding that even Epigonal Tiahuanaco strains are at most lightly and dubiously represented. As to Early Nazca culture influence, there are numerous enough indications of this, in ware unquestionably made by the Middle Cañete people themselves. Without exception, however, the ware showing Nazca resemblance is mediocre. Also, the resemblances are not to early Nazca phase A, but to later Nazca B, and to its decadent form Y, though largely without the Tiahuanaco or highland admixture which appears in phase Y in Nazca Valley.

As to post-Nazca and post-Tiahuanaco resemblances, there are suggestions, but little that one can put his finger on. The bowls with low vertical walls or recurved walls suggest Middle and Late Ica forms. Occasional designs like those illustrated in Plate LXXI, Fig. 2, and Plate LXXIV, Fig. 3, have a Late appearance, but of a generic character, not any one localized style. The same may be said of Plates LXXI, Fig. 4, and LXXIV, Fig. 4. Here and there are suggestions of the geometric red-white-black style of the Coast of post-Tiahuanaco and pre-Inca period. But this red-white-black geometric is expressed in a variety of local phases, and a specimen like Plate LXXIV, Fig. 2, does not tie up with any of these.

If we add that there is nothing specifically Inca or specifically Chimu apparent in the Middle Cañete finds, we have exhausted the last of the potential similarities and relations.

On the other side must be ranged the fact that the Middle Cañete potters devised several distinctive types such as the conical sieves, or distinctive sub-types such as the low and plate-like bowls. While the art was not carried to any high perfection, it was executed at its best with competence and the formulation of a degree of style.

The absorbed elements or similarities point southward to the region of Ica and Nazca. There is no indication of influence from the north, and surprisingly little from the highland. The indicated time position is quite clearly post-Early Nazca and pre-Late Coast culture. This would mean in a general way the time of Tiahuanaco-Epigonal influencing of the Coast; but on account of the non-discovery to date of remains of this type in Cañete Valley, it would be somewhat rash to assert that the Middle Cañete culture was either earlier or later than Tiahuanaco or precisely contemporary with it.

This placing of the pottery in the Middle Peruvian era, with some relation to or derivation from terminal Early Nazca, agrees with the findings from the textiles, whose remains are less abundant than the pottery but point to the same relations and chronological horizon.

## MIDDLE PERIOD METAL WORK

Metal is definitely rare in Middle Cañete tombs. The contrast is marked with Late graves. The only specimen I found was 169697 in A-16, a small bell made of an oval sheet of copper 40 mm. wide folded over, the surface punched into "goose flesh" bosses 2-3 mm. apart; the clapper is a pebble: Plate LXXVII, Fig. 5. No trace of silver or gold appeared. The intactness to date of most Middle tombs argues against the occurrence of precious metal in the culture.

## MIDDLE PERIOD TEXTILES

## CLOTH

Most of the Middle Cañete fabrics found have been briefly included in the analyses on which Dr. L. M. O'Neale's and my summary in "Textile Periods in Ancient Peru"<sup>1</sup> was

<sup>1</sup> Univ. Calif. Publ. Amer. Arch. Ethn., vol. 28, pp. 23-56, 1930. Middle Cañete is called "Early Cañete" in this publication.

based. Plate 11 of that report shows three specimens from graves A-9 and A-16. Dr. O'Neale has been good enough to review all the twenty-three preserved specimens again, and intensively. Her analysis is given in full in Appendix VI, and illustrations of the more interesting techniques and designs are shown in Plates LXXXVIII to XC (see also Plate LXXIX, Fig. 7).

It would be supererogation to add to this thorough examination by an expert, except to mention briefly a few general findings distinctive of the culture or significant of its time position.

Fabrics wholly of cotton yarns number 15; of wool, 7; of cotton and wool, 0. Early coastal textiles from Nazca, Ica, Paracas, and Supe use wool alone oftener than cotton and wool: 33 per cent as against 26 per cent. In the Middle period (Nazca, Ica, Lima, Moche) and in Late times (Nazca, Ica, Chincha, Ancon, Chancay, Moche) wool alone is only half as frequent as the combination: 26 vs 50, and 19 vs 36 per cent.<sup>1</sup>

No Middle Cañete tapestries have been found. This again indicates antiquity. The percentage constituted by tapestry of total fabrics examined is: Early, 7; Middle periods, 44; Late, 29.<sup>2</sup>

Twill is exceedingly rare in Peru. Only two pieces have hitherto been recognized; one Late Nazca, one Middle (Proto-) Lima.<sup>3</sup> The Middle Cañete collection adds a third: A12-169678b.

Tie-dyeing is represented by NE18-170262a. This is perhaps the earliest specimen so decorated yet found in Peru. Its rivals are a Nazca Y-Epigon and a "Proto-"Lima piece.<sup>4</sup>

Regularly interlocking warps and wefts, with scaffold or skeleton wefts, occur twice in the collection: NE18-170262b and 170322. This is a South Peruvian device, characteristic of Nazca and Ica, and typical of Early and Middle periods, although not unknown in Late.<sup>5</sup>

It will be seen that the Middle Cañete culture fabrics from Cerro del Oro point strongly toward Early or Middle and toward Nazca-Ica affiliations.

#### BASKETRY, SLINGS, CORDAGE, SPINDLES

Basketry was fairly abundant in the Middle Cañete culture. Specimens were found in Tombs A-2, A-8, A-12b, A-16, NE-1, NE-20. Twilled work and wicker work are most common. There is also a wicker-and-twined specimen and a coiled one, but unfortunately neither of these is quite identifiable as to period.

Plate LXXIX, Fig. 3, shows a flat twilled basket. It is 15 cm. in diameter; two other specimens from the same tomb (169698) measure 10 and 14 cm. The middle portion of this piece is almost flat for an area about 8 cm. square. At the corners of this square field the weaving elements are sharply twisted and pulled tight, resulting in four rigid spots from which the remainder of the basket turns upward. The courses of weaving beyond the corners also become increasingly circular to the edge of the basket. One of the accompanying baskets from the same tomb, which is less intact, shows an even sharper rise from the bottom to the rim.

Plate LXXIX, Fig. 4, is also twilled, but in softer material. It is bag-shaped. The height seems to have been 10 cm., possibly more, the diameter somewhat less.

Tomb NE-1 contained 170245, the remnant of one of the oblong twilled baskets which were so commonly used in ancient Peru to hold weaving and sewing materials, spindles, etc.

<sup>1</sup> *Ibid.*, Table 2, p. 28.

<sup>2</sup> *Ibid.*, Table 3, p. 32.

<sup>3</sup> *Ibid.*, Basic Table, at end.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*, Table 5, p. 50, and Basic Table.

Wicker ware is represented by the fragment of a flat tray, something over 20 cm. in diameter, Plate LXXIX, Fig. 6. Unfortunately, this is from the one tomb (S-3) excavated by Hurtado, the age of which is ambiguous. (It contained two black jars which are typical Late Chíncha, but also the typical Middle period bowl, Plate LXXI, Fig. 4. Hurtado regarded the tomb as Late. Possibly the bowl was found by the tomb diggers and included in its contents.) The specimen in question begins with six pairs of warps laid across each other. An extra warp is inserted in each pair during the outward progress of the basket, so that at the edge there are three rods in each of twenty-four warp units. One of each three is broken off, one turned to the left, and the third to the right, to form the edge. The single weft appears to be ordinary totora reed. The central 3 cm. of the basket consist simply of crossed warps without any weft. Then follow half a dozen courses of plain twining, after which the wicker weaving begins.

Other specimens of wicker work, without associated twining, from tombs A-8, A-12b, NE-20, establish this technique as undoubtedly characteristic of Middle Cañete culture.

Plate LXXIX, Fig. 5, is a piece of coiled basketry 13 cm. from center to edge. The foundation appears to be a bundle of grass stems. Most of the stems are split, so that the number in a coil is not readily ascertainable in their present desiccated condition. The wrapping seems definitely tougher and stiffer. The coils average almost exactly 2 per cm.; the number of stitches, from 5 to 6 per cm. There is no trace of design. The workmanship is even and competent. Most of the wear on the basket appears to have been on the inside. The specimen was found at Site Bx. Most of the remains in this area were Middle Cañete, but there were also a few Late objects and a series of sherds definitely more Nazca-like than most Middle Cañete pottery.

From the associations, I infer this coiled basket to be more probably Middle than Late in period, but the wicker-twined one the reverse.

*Braided Slings.*—Plate XC, Fig. 2, is a braided sling of soft, brownish, maguey fiber. The part that holds the stone has the braid divided into six flat cords. At one end of the whole is the usual finger loop, at the other a long tuft or tassel of fiber, roughly braided into a knot at the end. This piece is described by Dr. O'Neale in Appendix VI.

Two other slings, No. 169836, were found at Site Bx and seem Late in appearance. One of these has the center done in red and yellow Kelim tapestry.

*Cord and Rope.*—The outer lashings of mummies are frequently merely rude two-ply twists of totora. In somewhat better-made cord and rope, both two-ply and three-ply occur. For instance: F30-169849 includes a soft and rather loose-twist two-ply cord, averaging 5 mm. in thickness, and a harder twisted three-ply averaging about 4 mm.

*Spindles and Spindle Whorls.*—For some reason these objects suffered the heaviest post-excavation casualties of any class of specimens excavated by me. At the present writing only one intact Middle Cañete spindle whorl is available, NE1-170245b of Hurtado's collecting, Plate LXXXIII, Fig. 21. This is of pottery, cylindrical, 42 by 10 mm. It is incised with diamonds. These are roughened and then painted red and blue. The incisions separating them are filled with yellow, and the two ends of the cylinder have a row of white angles painted on a blackish ground. The painting was obviously done after the spool was fired.

Pottery spindle whorls, frequently painted in red, yellow, blue, and white on black or dark brown are typical of both Middle and Late Cañete. The period difference is in the shape. Middle period whorls are cylindrical, Late ones roughly globular (Plates LXXXIII, Figs. 16-20; LXXXVI, Fig. 12). The Late ones usually have the pottery surface burnished black, and only the incised lines are painted. The Middle cylinders are less intensely black in the ware, and the whole surface is more frequently painted over.



The habit of incising and painting pottery whorls is evidently a distinctive local Cañete habit which persisted from one period to the other. However, there is also a recognizable stylistic difference between the periods.

### MIDDLE PERIOD: VARIOUS

I list for record and for possible comparative use in future studies a number of odd items found.

F30-169846 is a bone awl and a piece of slate brought to an edge.

NE18-170263 and NE20-170277 are bundles of split canes, respectively 19 and 20 cm. long. They may have served as counters or been kept prepared for some technological or practical use.

NE18-170260 consists of two wooden pegs or tops, conical below, cylindrical above. The larger is 7.5 cm. long, 5 cm. in diameter; the smaller, respectively 7 and 4.5 cm.

Gourds are abundant in Middle Cañete tombs. In fact, poorer tombs sometimes contain nothing but gourds. These vessels are fragile and they only occasionally survived excavation, subsequent handling, and transport. None were found with pyrographic or other ornament. NE18-170265 is sausage-shaped, 25 cm. in length and from 5 to 6 cm. in diameter. Several small gourd vessels from Tomb A-16 are shown in Plate LXXVII, Fig. 6.

No. 169837 is a well-preserved piece of soft yellowish leather, which in North America would be taken for buckskin. It is a roughly cut rectangular piece of skin, folded twice as if for wrapping, and with a cord for tying at one end. The longer edge appears to have been irregularly cut into as if for a sort of zigzag fringe. There are also three rows of small holes in the skin, as if a cord had been meant to be drawn through these. These holes have been simply stabbed through with a knife. The dimensions of the leather are something over 30x20 cm. The piece was found in the area Bx, next to a fragment of a comb. The skin is so thoroughly pliable as to suggest no great age. On the other hand, it seems unlikely that a modern Peruvian would drop a good piece of leather on an ancient ruin. The specimen is mentioned here on account of the rarity of preserved objects of skin from prehistoric Peru. As already stated, no determination of age could be made for anything found at the quebrada-head Bx without more thorough excavating than it seemed advisable to undertake.

Coca leaves filled three small pouches A16-169698e-g. The determination by the Museum's Department of Botany is *Erythroxylon coca* Lam. It is significant in view of the period and the coastal location.

### LATE PERIOD AT CERRO DEL ORO

I recovered only enough Late material at Cerro del Oro to determine its relations to Middle period remains. The Middle culture being up to that time unknown, it seemed best to devote all possible effort and time to its exploration. The Late remains are in every way identical with those at Cerro Azul. There were undoubtedly some rich Late tombs on the Cerro del Oro, especially in the walled cemetery of site C; but these are precisely the burials which have been destroyed in the search for metal. Most of the untouched graves which remain are those of middle or lower class people. In those which I opened I found no gold, only traces of silver, and not much copper. It seems more profitable not to describe separately the Late material from Cerro del Oro, but to refer to the following account of the finds at Cerro Azul, in which Cerro del Oro Late items have been included.

### III. CERRO AZUL: LATE CAÑETE CULTURE

As already indicated, the Late culture of Cañete is very similar to the Late culture of Chincha, the next valley to the south. The two are no more than local variants of the same type. If in these pages I speak of Chincha culture in Cañete, there is no implication that people originating in Chincha Valley moved north to occupy Cañete Valley. The cultural relation is not one of complete identity but of a strong and pervading similarity.

Cerro Azul is the harbor town for the whole of Cañete Valley. Like all Peruvian ports, it is an open harbor, formed by a projecting headland which gives shelter from the prevailing south and southwest winds. This headland consists of a rocky cerro, or rather two such, the smaller having its cliff-like face washed by the ocean, the larger being a short distance inland and extending parallel with the shore (Plan, Plate LXXXI). On a narrow strip of beach to the north of these masses of rock are the pier, warehouses, customs office, and terminals of the network of little freight railways which radiate out from here. In most weathers the shelter for ships is good, although open to the northwest. Beyond the cerro, the flat beach stretches northward with a gradual westerly curve. Back of this beach stands the pueblo or town as distinct from the puerto or harbor facilities proper.<sup>1</sup> The name of both harbor and town is derived from that of the hills, which, at least at certain seasons of the year, have a definitely bluish tinge as seen from a distance. The two rocky massifs are connected by a swell of ground and look like a unit. They rise up boldly and are visible for long distances both at sea and over the flat floor of the valley.

While the modern harbor is at the north foot of the cerro, the ancient ruins are on the south side. They stand thickest in the angle formed by the smaller seaward hill and the main one (Plate LXXX, Figs. 1, 3, 4). Here is an approximately rectangular area of sandy soil between the cerro and the surf, its north end shut off by the smaller hill, its south opening into the flat, uncultivated coastal plain. The terraces and pyramids cluster most thickly at the northern end of this rectangular area. They are particularly numerous and impressive around a central leveled plaza. They tend to tier up from this onto the lower slopes of the hill. The sketch map shown in Plate LXXXI gives the general relations of the principal structures to one another and to the topography. It is literally a sketch, made by eye and by walking over the ground, without actual measurements.

I have assigned each principal pyramid or terrace a letter to help in making the record of specimen locality more definite.

All of the structures are of adobe. All are flat pyramids or terraces. There is nothing which could be construed as a building with walls and rooms. The site must have been one of cult, rather than a town or capital.

Back of the pyramids that reach uphill, the steep slopes of the cerro are more or less worked into narrow, irregular, straggling terraces, whose effect from below is reminiscent of the horizontal cowpaths often encircling pasture hills in California (Plate LXXX, Fig. 5). These terraces are of insufficient width to contain buildings and probably represent the result of efforts to construct tombs on the hillside. There is nothing that could be called genuine soil on the cerro slope. Where the surface is not bare rock it is disintegrated rock, with more or less windblown sand mixed in. In this insecure footing, tending constantly to slide, the poorer people made the graves of their dead, digging somewhat into the surface of the hill and supplementing with crude constructions, partly of adobe and partly of loose rock.

<sup>1</sup> E. W. Middendorf, Peru, II, 1894, in his account of Cañete Valley, pp. 126-144, has a sketch plan of Cerro Azul which agrees none too well with mine.



All the pyramids and all the cerro slopes give evidence of having been dug into in the search for treasure. But there is no indication that anything notable was found, because there is no sector which has been deeply turned over. Evidently there was no habit of burying either wealthy people or chiefs at Cerro Azul. Why this was so is hard to understand, in view of the amount of building construction around the plaza, and the scattered poor graves here and there. In this respect there is a marked contrast between this group of ruins and the area C on the Cerro del Oro, where there is little in the way of structures except enclosing walls, but where the diggers' reward in silver and gold must have been rich, and the graves were clustered close.

No traces of any culture but Late were encountered at Cerro Azul.

### POTTERY

Late pottery from Cerro Azul and Cerro del Oro is most often smoked black, not infrequently plain red. Red vessels with painted design were rare in my experience, nor do the scattered sherds suggest they were formerly numerous. The design is poorly executed technologically, and in several of the few vessels discovered the paint had mostly scaled off, or was lost after excavation. What there is of design suggests Late Chincha inferior ware without attempt at elaborate pattern.<sup>1</sup>

On the whole, the ware is definitely poor, even where the modeling has been done with competence. The paste is thick, not particularly well smoothed, and often gray instead of black. The chief exception is provided by occasional small flask-like vessels which are well smoked and well burnished. Incidentally, it is a local peculiarity that the small jars are almost invariably found inside the mummy wrappings. Even medium-sized jars are perhaps as often bundled in with the mummy as set beside it. This habit holds for the Late burials at Cerro del Oro as well as at Cerro Azul.

The pottery shapes also show no great variety. Jars predominate. These have almost always a high and often wide neck. Also there are almost always two handles, usually below the neck; although handles at the neck, vessels with single handle, and vessels without handle do occur. The most frequent form is amphora-like: a body longer than wide, and sloping toward a point or a quite narrow flattened base. From this shape there are transitions to an almost globular one. In the latter case the neck diameter is of medium width. When the vessel is elongated and conical-bottomed, the neck or mouth is sometimes nearly as wide as the body. Occasionally there is a piece that is somewhat flattened—oval in cross section—and very small toy-like jars may be asymmetrical.

Plates LXXXII and LXXXIII indicate the range of shapes as well as sizes. It seems unnecessary to go into more detailed description.

The chief differences from Late Chincha ware, as described by Strong and myself on the basis of Uhle's collection formed for the University of California in excavations near Tambo de Mora,<sup>2</sup> is that the Cañete ware is on the whole coarser in quality, contains a higher frequency of amphoras and a lower frequency of round-bellied jars and other shapes, less often carries a design, and in the majority of instances is smoked black. All of these, however, are differences of proportion only. Blackware occurs in a considerable proportion of cases in the Uhle collection.<sup>3</sup> In fact, I suspect that the high frequency of design-painted ware in his Chincha collection is due to his having dug mainly in the graves of the well-to-do. As one walks over the Tambo de Mora ruins in Chincha and notes the sherds and surface

<sup>1</sup> Kroeber and Strong, *The Uhle Collections from Chincha*, Univ. Calif. Publ. Amer. Arch. Ethn., vol. 21, No. 1, pp. 1-54, 1924.

<sup>2</sup> *Ibid.*

<sup>3</sup> Fifty-six out of 164 vessels or 34 per cent: Univ. Calif. Publ. Amer. Arch. Ethn., vol. 21, p. 252, 1925.

debris, or inspects the finds which huaqueros or local amateurs have assembled, one has the impression that blackware forms a larger proportion of average Late Chincha pottery than in the Uhle sample. This tends to equate the two valleys.

Pottery showing specific Inca features is scarce at both Cañete sites, definitely rarer than in the Uhle Chincha collection. I did not find or see a single aryballos, nor any other vessel of indubitable Inca form. The only pieces secured which are definitely reminiscent of Cuzco are purchased handles of Inca plates, Nos. 169574-6. One, a cat-head, is polished black; another, modeled into a deer hoof, is reddish buff. They are evidently fragments, and have had the broken edge ground off, no doubt by a modern owner. These specimens are without authentic provenience, but were secured from a small amateur collector in the harbor town, and, if not actually from the Cerro Azul ruins as alleged, they are no doubt from some other near-by point in Cañete Valley.

Plate LXXXIV, Fig. 1, shows portions of a large white-slipped jar with red and black design. This I excavated in Burial 3, in the west front of Pyramid B. Only a small part of the vessel was recovered. Either the parts found had been reburied, or the missing portions had been lost when the sand slid away. The walls are from 8 to 10 mm. thick, the paste fairly coarse, but the workmanship even. The illustration shows one handle and the red and black painted design, which depicts an animal resembling a dragon. Parts of several such figures appear among the sherds recovered; the drawing combines these into a complete figure.

Similar to this is the fragment of a large pottery vessel from Hacienda San Benito, shown in Fig. 2 of the same Plate. This is painted in black and red on a white slip and shows the same monster head. There is also a hollow human face molded on the shoulder. The slip and pigments used, as well as the paste, are closely similar in the two specimens. The present one is slightly heavier, the ware running from 11 to 12 mm. in thickness.

No. 169581 is fragments from a very large and coarsely made vessel, or more likely from two. Coarse grit was used for tempering, which has baked to the surface on the outside. The inside was apparently given a coating of somewhat finer clay before firing. Four of the pieces run to a consistent thickness of 25 mm. The rim sherds have a lip turned out at an angle of some 30 degrees. The largest fragment increases from 24 to 35 mm. in thickness just before the neck rim, which is turned nearly at right angles to the vessel wall. Both these vessels must have been nearly a meter in diameter; large enough, in short, that they could have been used as a bath tub or salt pan or something of that sort. Why they should have been buried in the sandy fill of one of the lower pyramids near the beach is hard to imagine.

A pottery figurine is shown in Plate LXXXV, Fig. 5. This is 150 mm. in length. The paste is pale reddish, slipped with white, which has been well smoothed. The head is painted red. The figurine is female, and similar to those found in Late remains in Chincha Valley.<sup>1</sup> For another specimen, see below, under "Various."

Also of pottery, in most cases, are spindle whorls. Five of these, from both Cerro Azul and Cerro del Oro, are shown in Plate LXXXIII, Figs. 16-20. The shape is more or less spherical, in contrast with the cylindrical whorls of Middle period. Some are plain smoked black, some smoked black with incisions overpainted after firing, and some are reddish. The diameter is usually not far from 15 mm. These also have close Chincha affiliations.<sup>2</sup> Compare also the Late spindle whorls in the cache described below and shown in Plate LXXXVI, Fig. 12.

<sup>1</sup> *Op. cit.*, Plate 14.

<sup>2</sup> *Ibid.*, Plates 16-18.

## CLOTH

The Late textile fabrics found at both Cerro Azul and Cerro del Oro were mostly fragmentary or in poor condition. They are so patently similar to Late textiles from all along the central Peruvian coast, which are by now well known and abundantly illustrated, as to need no special discussion, particularly as no notably fine pieces were encountered. One specimen may be excepted.

Plate LXXXV, Fig. 1, shows a piece of painted veiling doubled and end-twisted to serve as a headband. This type of gauze or veil cloth is common enough in Peru—the interest in the present instance is in the painting. This is in two (or more?) shades of brown, and the patterns were applied after the gauze had been doubled and stitched into its present shape, the paint running through from the upper to the lower fabric.

## METAL

Metal is definitely more abundant in Late than in Middle Cañete times. Most mummies had copper or occasionally silver sheets or ornaments bestowed about the head, most frequently perhaps in the mouth, but also about the ears or elsewhere on the face. Where the metal is entirely corroded it shows in green stains on the bone or teeth, as previously mentioned. This burial habit prevails for the Late period of all parts of the Peruvian coast which I have visited, from north of Trujillo to south of Nazca, frequently even as regards the graves of the poor. The most frequent disposal is of a round or oval sheet of thin metal about the size of a coin, apparently laid on the tongue—a sort of Charon's obol.

Copper must have been fairly abundant in order that it could be used as regularly as this; for instance, even in the group burials of relatively poor people at Cerro Azul, who were as a rule put away with at most one or two pottery vessels of rather meager quality and dressed in wrappings of no distinction.

## VARIOUS OBJECTS

The following are various objects of more or less interest from Cerro Azul, but which, unless specifically mentioned, were not found in tombs:

A small llama in pottery, No. 169483, from Quebrada 7.

A sherd with characteristic Late Ica beveled lip, No. 169484, from near Pyramid I. The painted pattern is mostly gone, but the remnants of it suggest Late Chinch-Ica style.<sup>1</sup>

Five unpainted sherds of varying size and thickness, each bored with from one to three holes, are shown in Plate LXXXIV, Fig. 3. They are from Pyramid H. Three of the sherds have strings of two-ply cotton through the holes. In fact, two of the three are still tied together. The sherds look as if they had been roughly hacked out. The holes are up to 7 mm. in diameter. All have been bored, or, perhaps more exactly, gouged, from the outer or convex side of the sherd, with a conical point. The qualification as to gouging is made because several of the holes are not truly circular. One or two of them show a little drilling from the inner side, but not much.

No. 169488 comprises a parcel of sherds with design in Late Chinch-Ica or Ica style, but crudely executed. They are also from Pyramid H.

No. 169493, from near Quebrada 6, shown in Plate LXXXV, Fig. 3, is a double-headed stone figure only 34 mm. high and rudely carved. It may represent two persons in one blanket. A similar, smaller specimen occurred in the cache described separately below.

No. 169494, from near quebradas 6 and 7, is a pottery figurine of Chinch-Ica type similar to the Late one from Cerro del Oro illustrated in Plate LXXXV, Fig. 5, but smaller. The length from the genitals to the top of the head is 85 mm. No. 169515 is a seated pottery figurine from Quebrada 2.

<sup>1</sup> Kroeber and Strong, Chinch-Ica, as cited, 1924, Figs. 12, 16.

No. 169495, a lump of reddish purple paint, was found with a shell. This and the next are also from the area of quebradas 6-7.

A small sherd of smoked blackware, No. 169497, has the appearance of having been lead-glazed on the outer side. The metallic luster is definitely marked, but may have been produced by contact with something in the ground.

A small stone carving of a maize ear, or rather of two ears, is No. 169501, from Quebrada 7.

No. 169502, from Quebrada 1, is a small pottery whistle on a string.

No. 169503 is wool which my highland Indian workmen declared to be vicuña.

No. 169509, from Quebrada 1, is a small chisel of bronze, corroded.

The lower half of a fox's leg (*Dusicyon sechurae*) was found in association with some Ica-like fragments of pottery and fragments of striped cloth, a crude sling, and two shells (No. 169514, from Quebrada 2). The fox's leg has fragments of soft cotton string adhering to it. The fur is short and yellowish. The sling is peculiar in that its center piece is a narrow strip of hide with soft brown fur. This fur is mostly gone, but was evidently quite short. The skin averages 4-5 mm. in thickness and the strip is only about 10 mm. wide.

Nos. 169542-43-44 were found in Burial 3, in the west front of Pyramid B, with the fragmentary large jar No. 169541 shown in Plate LXXXIV, Fig. 1. One of the three pieces is a rock crystal. The second is a fragment of a wooden tablet, carved with a repeating pattern of conventionalized birds (Plate LXXXV, Fig. 4). The rectangles enclosing the bird figures have been painted red. The tablet has been cut across the grain of the hard wood used. Perhaps for this reason it broke in antiquity. The piece retrieved is bored with four small holes, through which cotton twine has been passed and lashed from one hole to another—no doubt also across the break to the missing part of the tablet. The string appears to be three-ply. One original edge of the tablet has been preserved: this is incised in alternating brown and red diamonds.

The third specimen of this lot is a balance, No. 169544, Plate LXXXV, Fig. 2. The dimensions of the beam, of hard dark wood, probably huarango, are 168 x 25 x 13 mm. The beam is unornamented and slightly curved. The curvature appears to have followed the grain of the wood, rather than to be due to subsequent warping. Instead of scale-pans, a net was attached to each end of the beam, according to a well-known Peruvian variant. The nets are hung by two strings, not three; they are of a fine hard fiber, apparently neither cotton nor wool, probably maguey; the heavier cord from which the scale beam balances appears to be cotton. All the suspensions are by an informal knot tied just large enough to prevent the cord from slipping through the perforation. Compare Chíncha, as cited, Figs. 20, 21.

Two dog skulls, Nos. 169604-05, were found in the cemetery in tombs 4, 5, 7, but apparently not associated with any grave. The burial of such skulls appears to have been a local habit, irrespective of period, since Middle culture graves A-1, A-4, A-12, A-15-16 at Cerro del Oro also contained dog skulls (see Appendix II).

No. 169606 is the remnants of a pouch of guinea-pig skin filled with cinnabar. This is from the north platform of Pyramid D, on which we made our camp. In fact, the object lay in the sand only a few inches under my sleeping bag, which, in the course of a week or two, worked away enough of the sand for the red paint to show one morning.

This is typical of the way artifacts are distributed at Cerro Azul. What is discovered in tombs is usually of meager quality and in poor condition. Specimens of better workmanship turn up with apparent randomness in the sandy fills in or around the terrace-pyramids. Most such objects are too good to have been outright refuse. Perhaps they were deposited as votive offerings, some of which, as the terraces were later extended, may have been moved, broken, or scattered with the sandy soil in which they had been put away.

My Cerro Azul grave excavations happened to yield no "chalk" (diatomaceous earth), but several Late tombs on the Cerro del Oro did: Nos. 169749 (C-22); 169763 (near C-22); 169863 (near C-31); 170292 (Hurtado, S-3, "Chíncha" type). Another piece occurs in the cache described below. These lumps of material are also known from Late graves at Chíncha.<sup>1</sup> My workmen suggested that the chalk was rubbed on the fingers before spinning.

<sup>1</sup> Kroeber and Strong, 1924, p. 29.

## A CACHE

My most remarkable find at Cerro Azul is a cache or deposit which had been buried in the slope of Quebrada 1, the most seaward gully, which runs up from the foot of Pyramid B northward into the northwest cerro. Here, two of my workmen, while I was elsewhere in the ruins, encountered what seemed to them a small mummy wrapped in white cotton cloth. It lay near the surface—perhaps only a foot or so down; there were no signs of tomb wall; and the bundle hung together well. They therefore dug it out and then called me. Plate LXXX, Fig. 2, shows the object as uncovered. The photograph reveals its superficial position in the slope, as well as the half-disintegrated rock of which the “soil” was composed. The cubical shape of the find seemed strange for a mummy, and as soon as the outer wrapping was removed, the parcel proved to contain a set of objects and materials mainly connected with textile fabrication, very snugly and compactly packed together, and for some reason deposited among the shallow burials on the slope of Quebrada 1: perhaps accompanying a corpse or in lieu of a missing corpse, but possibly as an offering or for safe-keeping. The ingenious stowing of the contents in bundles, and the neat tying together of these into the larger parcel, suggest that the owner of the outfit carefully arranged his own effects as he would want to find them again, whether in another world or after a journey or temporary absence in this one. The effect is quite different from all tomb gifts or equipment found by me in Cañete, whether of Middle or Late period.

Equally remarkable is the good preservation, which contrasts with the decay and corrosion, even of pottery slip, characterizing nearly all graves opened, especially at Cerro Azul. The whole site is exposed to constant fog for half the year, and Quebrada 1 lies particularly open to the prevailing south to southwest wind. The splendid condition of this deposit, in view of its shallow covering of rocky soil, must therefore be due mainly to the care with which it was packed and wrapped and rewrapped, possibly also in part to the absence of body-juices, which in burials presumably often increase rot and decay.

At any rate, however it came to be, we have here somebody's outfit of tools, materials, amulets, and prized possessions arranged exactly as he or she carefully arranged them four hundred or more years ago, and but slightly deteriorated by age. The personal touch of the owner is evident. The value of the find is not so much in the individual objects, as in the fact and nature of their assemblage into a unit.

The contents group as follows:

No. 169559, white cotton cloth enclosing the whole. In this were two primary parcels, which I call A and B.

A was again wrapped in a cotton cloth, 169547. Inside this was an oblong twilled basket, 169545; and, lying on or beside this, three loose objects, 169546a-c. The basket itself is 169545a; the contents, 169545, as listed below.

B was wrapped in a rough cloth, 169558. Inside this was a coarse but soft cloth, 169557. In this were four parcels, which we will call B1, B2, B3, B4, each wrapped again in a cotton cloth, respectively 169550, 169552, 169554, 169556.

The four sub-parcels in B contained the following:

B1, 169548, a net sack and its contents as listed below; also 169549, two heavy pieces of shell and a wool cord.

B2, 169551, a bundle of skeins of yarn, wool(?), and cotton.

B3, 169553, a cluster of balls of thread of different colors.

B4, 169555, a large ball of white thread.

The detailed contents of A, B1, B2, B3, B4, will now be given with reference to the pieces illustrated in Plates LXXXVI and LXXXVII.

## BASKET AND CONTENTS: PARCEL A, 169545

Twilled basket, with folding top: 36 x 22 x 10 cm.

Cane flute, 195 mm. long, 19–22 in diam. Bore 16 mm. at mouth end, 11 at butt. Mouth end cut off somewhat diagonally, with a rounded notch in line with the stops, c. 7 mm. deep, 9 wide. Seven stops, c. 7 mm. diam.; separated by 17, 15, 14, 15, 14, 16 mm.; 21 to notch, 23 to butt. Three thread lashings; groove for fourth near butt. Plate LXXXVI, Fig. 14.

Three small gourd vessels: shallow, circular, 60 mm. diam.; half pear shape, 82 x 68 mm., c. 38 mm. deep; tube-like, 82 mm. long, diam. of opening 10–11 mm., maximum diam., near bottom end, 26 mm.

Comb, 100 x 62 mm. Cover, splints twilled with brown cotton thread; ends, a black, hard gum or pitch. Spines, aver. projection, 20 mm.; 26 remain, 13–14 lost. Plate LXXXVI, Fig. 4.

Wooden ear-plug, probably of algarrobo. Diam. 38 mm., inner diam. 26, 11 mm. thick, edge c. 3 mm., concave. Plate LXXXVI, Fig. 3.

Stone carving, crude face on one side, load of maize(?) on back, 47 x 30 x 14 mm. max. diam. Stone bluish gray, hard, parts of original surface of pebble remaining. Plate LXXXVI, Fig. 7.

Whitish stone carving, two heads out of one blanket, like Plate LXXXV, Fig. 3. Height 21 mm. Plate LXXXVI, Fig. 6.

Small carved stone, pear or pendant shape, 13 mm. high; base rubbed flat. Balance weight(?). Plate LXXXVI, Fig. 5.

Pyrrhotite, magnetic iron sulphide; several rubbed surfaces; dimensions about 35 x 27 x 28 mm. Weight, 81 grams.

Ball, about 15 mm. diam., of lead; surface, thin film of grayish white; inside cuts with a knife, leaden luster. Weight, 19 grams. This piece has not been analyzed, but its specific gravity is 11.17, very near that of pure lead. Scrapings from the surface when analyzed gave lead and no other metal in quantity, according to Chief Curator of Geology H. W. Nichols.

So far as I know, pure lead has hitherto not been discovered in prehistoric Peruvian remains. The spherical shape of the casting, and the size, suggest a musket ball of about 0.60 inch caliber. If so, the whole cache would be of Conquest or Early Colonial period. But then, why the bronze knife, the silver needle, and over a hundred objects of native material and manufacture without a trace of anything European? It seems more probable that besides silver, copper, and tin the Peruvians occasionally also smelted and cast lead. Either way, the little ball is significant historically.

Quartz crystal, 43 mm. long, diam. 12 mm. at one end, 7 at other.

Small flake of translucent flint or chert, one edge good, traces of red paint; 23 x 16 mm.

Lump of "chalk," that is, diatomaceous earth, 63 x 58 x 25 mm.; most surfaces show rubbing away. Weight, 20 grams.

Slab, c. 48 x 27 x 8 mm., of fine-grained blackish stone, probably flint, surface similar to touchstone; both surfaces and all edges much rubbed down. Weight, 21 grams.

Blackish hard-grained pebble.

Gray pebble, conical or triangular, base rubbed flat and smooth; 21 mm.

Fossilized hinged shell(?).

Half of heavy *Conus* shell, edges much rubbed down, all surfaces worn; 75 x 65 mm. Plate LXXXVI, Fig. 2.

Bone receptacle of posterior part of a skunk (*Conepatus inca*) skull; one end plugged. Plate LXXXVI, Fig. 1.

Two concretions or molluscan tubes.

Six empty spindles wrapped in a cotton cloth. Two unpainted, 262, 265 mm. long; four painted (Plate LXXXVI, Fig. 12), 284–291 mm., diam. 3–4 mm. Painting: white, yellow, red, black. Whorls: oval, conical, biconical, pear-shaped. Colors: blackish gray; purplish red; yellow with red band on which are yellow dots and white circles; red with white dots; black with red base band, both with white dots; same, two red bands.

Loose whorl, conical, red with black central band.



Gauze veiling cloth, one end white, one brown, the latter much decayed. Contained five wound spindles, silver needle, bone awl, as follows:

Five spindles wound with cotton thread; 260–290 mm. long; diam. of wound bobbin, 20–45 mm. The whorls can be felt with certainty inside the three thinner ones.

Silver needle, patinated like bronze; 95 mm. long, diam. c. 1 mm.; point fairly sharp but sudden, like a piece of pinched-off wire, without taper. The eye is a slit on one side, a very small hole on the other; remnants of fine thread. Just below the eye, a slack-twist cotton cord or thick thread has been wound around the needle, as if to protect a remnant of thread. Plate LXXXVI, Fig. 9 (upper).

Fine bone awl, 155 mm. long, slender, surface polished with use. The upper two-thirds woven into a red-brown-white case or handle, terminating in a 40 mm. tassel of sixteen red wool threads. Plate LXXXVI, Fig. 11.

Gauzy cloth, one-half white, other brown, the latter with a red braided edge, containing five spindles and two other sticks, as follows:

Five spindles wound or half-wound with cotton thread, three white, two brown; in two the spindles are still visible, in the three others they can be felt. Length, 250–265 mm. There is also an empty spindle 217 mm. long. Plate LXXXVI, Fig. 8.

Weaving batten, 287 x 15 mm.; hard, dark wood.

Spindle or bobbin 332 mm. long, 6 in diam., taper mostly toward one end, the other with a cap or button of close-twist thread. A little brown cotton thread is desultorily wound around the upper third.

Similar (but not out of the same cloth wrapping) is a red-painted spindle 265 mm. long, diam. 4.5 mm., taper all one way, other end capped with a black seed(?) 12 mm. in diam., which is loose but does not detach. Plate LXXXVI, Fig. 13.

A cloth, similar to the last except with small checker pattern instead of white portion, enclosed a bundle. This bundle appears to contain a few small crooked, woody twigs roughly wrapped in totora(?) reed tied with cotton string.

Bladder(?) or guinea-pig skin, tied with string, and wrapped in a torn piece of cotton cloth; about 12 x 9 cm.

Length of agave-fiber braid rope, tapering off at one end.

Three small balls of cotton thread, tan, dark brown, white.

A wad of hair, c. 90 x 70 mm., in a few lashings of reed. Dark brown, seemingly human.

A black hardwood needle, 84 mm., end flattened, contains circular eye. Below this, a wad of owl(?) or down feathers is wrapped on. Plate LXXXVI, Fig. 9 (lower).

Fifteen spines, 90–110 mm. long, most of them still bearing at the butt rovings or tufts of unspun cotton. Plate LXXXVI, Fig. 10.

#### OUTSIDE THE BASKET BUT WRAPPED IN PARCEL A: 169546

Wad of human hair, c. 18 x 14 x 6 cm., folded in a knotted square piece of coarse brownish gauze. Weight of hair, 110 grams.

Three wooden pegs or stakes, 32–34 cm. long, 1.5–2 cm. diam., one end sharpened, the other roughly rounded. The knife strokes are plain. There is also a fragment, 20 cm. long, of a fourth sharpened stick, 12–13 mm. diam.

Peg- or top-shaped object of huarango wood, cylindrical, then notched, then sharpened to a point. Length over-all 140 mm., diam. 38–42. Notch 8–11 mm. deep, 20–30 wide. Cylindrical and conical portions each c. 60 mm. long. Plate LXXXVII, Fig. 6.

Weaving batten, 294 x 13 mm., of cane or light wood.

Unpointed spindle, 266 mm. long, wound to thickness of c. 26 mm. with dirty white cotton crêpe thread.

Small ball of cotton or fiber thread, and another of fiber.

## PARCEL B1, 169548-9

Net sack with drawstring, c. 23 x 15 cm., 4.5 mm. knotted mesh. Probably maguey. Plate LXXXVII, Fig. 2. This held the next seven items, which together constitute No. 169548.

Cylindrical net object, c. 15 cm. wide, 47 cm. in circumference; 3.5 mm. mesh; maguey thread, heavier than in last. Complementary pattern in red and bluish green, the figures separated by one strand of natural tan thread. Use wholly problematical, but the cylinder would have fitted a human head. Plate LXXXVII, Figs. 3, 3a.

Fragments of a similar net, finer thread and mesh, remnants of pattern, apparently also cylindrical. This appears to have been old and torn when deposited.

Three hanks or winds of neat maguey string, and a fourth untied and beginning to snarl.

Two skeins or rovings of soft maguey fiber.

Square of cloth, brown and tan small check, c. 26 x 34 cm. Sewn down the middle, but one long edge torn off; one short end cut off, apparently with four separate knife cuts.

Forty-three half-spools of hard, dark wood, probably huarango, tied together. Plate LXXXVII, Fig. 1. Two breaks. The three lengths contain eighteen spools, 68.5 cm. long; ten, 36.0; fifteen, 50.5; total forty-three, length 1.55 meters, or, on allowance for two ruptures, 1.58. Somewhat more than half of this length would be the wooden spools or beads, the remainder, string. Each spool is a  $\frac{2}{3}$  cylinder, hour-glass notched toward the middle. Each is separately strung to the next as shown in Plate LXXXVII, Fig. 1; a self-knot alone keeps the string from slipping out of its hole. The largest spool is only about 5 mm. longer than the shortest, but almost twice as broad (27 vs 14 mm.) and thick, and must weigh four times as much. Necklace or other personal adornment?

Bronze lunate or *tumi* knife, with wrapped handle and wrist cord. Plate LXXXVII, Fig. 4. From end to end of blade, 114 mm.

In the same parcel B1, but outside the net sack, were 169549, a 9-strand (3 threes) braid of white wool 72 cm. long, 3-4 mm. wide; and two pieces of *Spondylus* shell. These have been hacked or broken off, but one edge has been rubbed smooth. They measure about 10 x 8 cm. each and weigh 211 and 165 grams.

## PARCEL B2, 169551

Six skeins of thread, each crushed together, but each ready for winding. Three are tan, one whitish, one red, one dark blue or "black"; the last appears to be wool and is really two skeins. The thread is crêpe-twisted, especially the cotton. Weights of the six skeins in order, 205, 196, 101, 56, 109, 102 (+57) grams. The skeins are suspended on loops of totora reed. Their lengths are 70, 52, 46, 36, 51, 42 (and 48) cm.

Three balls of blackish thread.

## PARCEL B3, 169553

Fifteen balls of cotton thread, from 35 to 90 mm. diam. Two are white (including the largest); three tan (one darker), two brown; two red (one more rusty); six of as many hues ranging from dark blue to greenish.

Small wad of human hair, in a twisted cloth.

Square-braid cord, 40 x 0.5 x 0.5 cm.

Bone awl, blunt, 86 mm. long, on 40 cm. 3-ply cord. The cord passes through a hole in the end into the hollow part of the bone, where it is knotted; the other end has a loop through which the awl can be slipped for suspension. Plate LXXXVII, Fig. 5.

## PARCEL B4, 169555

Ball of fine white cotton thread, c. 9.5 cm. diam. The thread is wound on in flat masses, not singly.



## IV. SUMMARY

Two cultures are apparent in pre-Hispanic Cañete Valley, a Late and a Middle.

The Late Cañete culture is nearly identical with the Late culture of Chincha, and closely related to that of Ica and Rio Grande (Nazca) valleys. It is the only culture represented at Cerro Azul and the upper one of two at Cerro del Oro. It agrees with the Chincha culture in shapes of pottery vessels, figurines, Kelim and other tapestry, abundance of copper, presence of bronze, silver, and presumably gold, the habit of erecting clusters of pyramids, non-deformation of skulls; and even in minor features, such as the occurrence of balances and diatomaceous earth in graves. Minor variations from Chincha are a somewhat greater proportion of blackware, and inferior execution of painted ware; more frequent painting-over of incisions in blackware spindle whorls; and absence or near-absence of specific Inca (Cuzco) types. However, this last difference is only relative, because Kroeber and Strong distinguished a Late Chincha phase I unassociated with Inca types, and a Late Chincha phase II associated with them, among Uhle's grave finds in Chincha.

The Middle Cañete culture is known only from Cerro del Oro, where it underlies the Late—physically in spots, and inferentially everywhere in time. Its chief characteristics are:

1. Frontal deformation of skulls.
2. Cubical, hand-made adobe bricks.
3. Walls and terraces rather than pyramids or buildings.
4. Metal rare, and so far as known only copper.
- 5, 6. Rarity of tapestry weaves and of use of cotton and wool in the same garment.
7. Occurrence of interlocking warps and wefts, with scaffold or skeleton wefts.
8. Cylindrical spindle whorls of pottery, incised and over-painted.
9. Double-spout jars, the spouts tapering and spreading.
10. Painted and modeled women's faces, with long almond eyes.
11. Similar figurines of pottery.
12. Pottery Pan's pipes, triangular.
13. Conical sieves of pottery.
14. "Cumbrous" bowls of somewhat aberrant design, and less heavy than elsewhere.
15. Footed and unfooted flat bowls with vertical walls or incurved lip.
16. No pottery shapes or designs of definite Tiahuanaco or other highland type.
17. Gourd vessels abundant, but without pyrography or ornament.
18. Basketry fairly frequent; twilled, wicker probably coiled, possibly twined also.
19. Coca.

Of these traits, 8, 13, 14, 15, and perhaps 18 are local peculiarities.

Traits 1, 3, 4, 7, 10, 12 are Early Nazca; 9 is typical of terminal Early Nazca, Y; 2 of "Proto-Lima," that is, Middle Lima (Tiahuanacoid-Highland and terminal Early Nazca influence); 5, 6, of the Early period southern coast.

Trait 15 looks like an anticipation of Middle-Late Ica forms, but it is only an approximation.

Notable is 16, the absence of Tiahuanaco influences.

It may therefore be concluded that the culture here called Middle is middle in time, viz., post-Early Nazca, and pre-Late Ica, Chincha, Lima, Chancay. It roots partly in terminal Early Nazca culture; but, in distinction from this, is remarkably free from the Tia-

huanacoid influences which in most coast valleys are the specific criterion of prehistoric Peruvian Middle time.

There is a possibility that an Early Cañete culture underlies the Middle Cañete one in parts of the Cerro del Oro. The slender evidence however consists only of some unassociated Early Nazca type sherds. Extensive and careful excavations would have to be performed before it could be decided whether such an earlier culture once flourished on the spot, or whether its fragments represented terminal Nazca (Y) imports into the Middle Cañete culture.

# APPENDIX I

## MIDDLE CAÑETE TOMB DESCRIPTIONS

### KROEBER EXCAVATIONS

#### SITE A<sup>1</sup>

*Tomb 1.*—Trench-like, E to W, between terraces; floor 120 cm. below surface. Four bodies in row on up-hill (S) side, facing N; pottery along their feet along N wall. Clothing rotted to powdery scraps. Numerous fragile calabashes, deep, not bowl-shaped. Plate LXXVIII, Fig. 1.

*Tomb 2.*—Adjoining 1 on E; 70 cm. square, 100 floor to surface. N side formed by a large rock. Cylindrical stone 80 cm. long laid across N side of top. Clothing partly preserved, frozen stiff with salt. Mummy lacked cranium; mandible present.

*Tomb 3.*—Adjoining 2 on S, i.e. out of line. Craniumless mummy under vault-roofed niche of tomb; walls 100 cm. high. No pottery or objects. Plate LXXVIII, Fig. 2.

*Tomb 3a.*—Not well defined; adjoining 3 on S. Child's body, head in cloth wrapping knotted to a peak. No objects except a dog mandible.

*Tomb 4.*—100 or more meters N of 1-3a group, slightly higher. Adobe-walled trench-chamber. Three children's bodies, humped, heads literally between knees. All heads bandaged two ways. Heads of first and second bodies only 30 and 50 cm. below surface; third slightly deeper in cave-like chamber to W of others. No pottery or objects, except dog skull with second body.

*Tomb 5.*—Five meters SW of 4. Four bodies; adult, broken, contracted position, but nearly flat; child, in chamber or recess; two adults, in square chamber of adobe, contracted position, but head not between knees, and either fallen over or laid side by side. Specimen 169792 with first body, 169639-40 with second, 169643-46 with third and fourth.

*Tomb 6.*—Two hundred meters S of 1-3a, at lower level of hill surface.

*Tomb 6a.*—"Under" 6, 150 cm. below surface. Roofed with adobes of double dimensions. Child's body.

*Tomb 6b.*—Adjoining to NW, 250 cm. deep; 220 cm. to top of body. Similar cave-chamber, similarly roofed. Two skulls of adults, one headless skeleton, apparently of adult, but small-boned.

*Tomb 6c.*—Depth 210 cm. Whole body.

*Tomb 7.*—Adjoining 5 on S; 90 cm. deep. Body, with bowl laid on head; also fragments of baby's skull.

*Tomb 8.*—Adjoining 7 on S; about same depth. Two seated bodies, one on a fragmentary wicker basket; both headless, but one with lower jaw.

*Tomb 9.*—Near 5, 7, 8, to S.

*Tomb 10.*—Two meters E of "4" (sic; for 9?). Body without cranium, but with mandible.

*Tomb 11.*—In line with 9. Two bodies; no artifacts.

*Tomb 12.*—Fifty meters NW of 6 in direction of 4, 5, 7, 11. In adobe-walled chamber 190 cm. below surface, 50 x 60 cm., 60 cm. high, a child's body. Chamber roofed with three sticks; across these, canes; on canes, soft earth; child's body roped as usual, clothing rotted; seated on a blackish cloth. One calabash, no pottery. In another adobe chamber 80 cm. from last, and roofed with inclined stones, were two roped bodies, one lacking most of its limbs, the other its head and arms; with them was at least one calabash but no pottery.

*Tomb 13.*—A few meters W of 9-11; chamber as usual; in rocky soil.

*Tomb 14.*—Adjoining 13 on N. Similar.

*Tomb 15.*—SE and downhill c. 40 meters from 4, 9, 13 group.

*Tomb 16.*—Near 15. Outside 110 cm. square, inside 80 cm.; of adobes, except front of stones and adobes; 80 cm. high interior; 110 cm. soil above to surface. Wooden beam across top; from this to front

<sup>1</sup> These A tombs lay in 5 groups: 1-3a; 4, 5, 7, 8, 9, 11, 13, 14, c. 100 meters N; 15, 16, 40 meters SE from 4-5; 6-6c, 200 meters S of 1-3a; 12, 50 meters NW of 6-6c toward 4-5.

wall, roof of stones. Six bodies were seated in this one chamber, as shown in Plate LXXVIII, Fig. 3, none of them with head between knees. Objects 169692-713.

#### SITE F

*Tomb 20.*—Ten meters uphill from a sacked Late cemetery.

*Tomb 21.*—Adjoining 20 on W; 100 cm. deep. Half-arched, sloping roof of adobes.

*Tomb 25.*—Near 20-21. Contained only body and gourd vessels.

*Tomb 26.*—Twenty meters N of 20-21, on same level of hillside; 110 cm. deep; against a wall. Late burials downhill from this.

*Tomb 27.*—Uphill (E) from 26, behind another wall; 110 cm. deep.

*Tomb 28.*—E of 27, 130 cm. deep. Vertically above this grave was a Late or Chinchá-type deposit or slide of tumbled grave material, from 70 or 80 to 100 cm. thick, including three black 2-handled jars, a globular spindle whorl, and five undeformed skulls (169796-804). Plate LXXVIII, Fig. 4. Four pottery vessels were with the body of Tomb 28. Behind it (uphill) was a wall.

*Tomb 30.*—Six meters N of 26, on same level; 150 cm. deep; on E (uphill) side of a wall. Dimensions 75 x 75 x 75 cm.; 6 courses of adobes; floor "torta," caked mud; roof flat, of unsupported adobes. This roof had kept even dust from seeping into the tomb. A footed bowl was laid inverted on the mummy's head. Besides specimens 169843-49, the tomb contained a series of calabashes of shapes resembling pottery vessels.

## APPENDIX II

### MIDDLE CAÑETE TOMB CONTENTS

#### KROEBER AND HURTADO EXCAVATIONS

##### TOMB A-1

- 169609-12.....Four bodies
- 169613.....Brownish pot; lip, no handle
- 169614.....White jar; groove-tail fish design
- 169615.....Wide plate, half red, half gray; pieces only
- 169616.....Similar fragments
- 169617.....Wide plate, arc and cross design; broken but complete
- 169618.....Wide plate, striped; fragments, incomplete
- 169619.....Wide plate, arcs; fragments, incomplete
- 169620.....Comb fragments
- 169621.....Seven spindles (three with cylindrical whorls, incised and painted)
- 169622.....Dog's head, incomplete
- 169623.....Dog's head

##### TOMB A-2

- 169625.....Body and mandible, without skull
- 169626.....Fragment of coarse basketry and comb

##### TOMB A-3

- 169633.....Body and mandible, without skull

##### TOMB A-3a

- 169634.....Child's body, head in cloth wrapping
- 169635.....Dog's mandible

##### TOMB A-4

- 169636.....Child's body
- 169637.....Dog's skull

##### TOMB A-5

- 169638, 41, 42.....Three of four bodies in tomb
- 169639.....Flat bowl, painted
- 169640.....Small jar
- 169643.....Four spindles with round and oval whorls, paint-incised
- 169644.....About thirteen bone and two spine needles
- 169645.....Painted plate; broken, not complete
- 169646.....Two pieces of painted cup-bowl, Early Nazca shape
- 169792.....Pottery head, Nazca type

##### TOMB A-6

- 169673.....Conical sieve jar, broken, but complete

##### TOMB A-6a

- 169666.....Double-spout jar, geometric pattern on white, Nazca style
- 169667.....Disk plate, center hole, painted
- 169668.....Jar, one handle, painted white
- 169669.....Jarlet

##### TOMB A-6b

- 169670-72.....Two skulls with jaws, body of small adult (with one of skulls?)

## TOMB A-6c

- 169674.....Body  
 169675.....Double-spout jar (spout lost); one globe on other  
 169676.....Plate, red and black striped

## TOMB A-7

- 169647.....Body  
 169648.....Low flat bowl, broken but complete  
 169649.....Jar, painted, side opening  
 169650.....Two spindles (one with globular incised whorl)  
 169651.....Pottery fragment; imitation of olecranon of humerus(?)  
 169652.....Four black ears of corn

## TOMB A-8

- 169653.....Two headless bodies, one mandible  
 169654.....Bird jar, Nazca Y style  
 169655.....Fragment of flat wicker basket

## TOMB A-9

- 169657.....Body  
 169658.....Large jar, black and white arcs on red  
 169659.....Plate; solid black arcs on red; whole  
 169660.....Brown and yellow cloth, fragment

## TOMB A-10

- 169661.....Body and mandible, without skull  
 169662.....Black and red conical sieve, complete  
 169663.....One ear black corn

## TOMB A-11

- 169664-65.....Two bodies

## TOMB A-12

- 169678.....Blackish cloth, brown and yellow edge  
 169679.....Half dog mandible  
 169691.....Six sherds

## TOMB A-12a

- 169677.....Child's body

## TOMB A-12b-c

- 169680-81.....Skull and body  
 169682.....Flat wicker basket  
 169683.....Ear of black corn

## TOMB A-13

- 169684.....Body  
 169685.....Jar; three papaya fruits; double-spout broken off  
 169686.....Three spindles (two with incised globular whorls)  
 169687.....Pottery figurine, breasts, black and white, incomplete

## TOMB A-14

- 169688.....Body  
 169689.....Calabash filled with cotton and plugged with adobe disk  
 169690.....Four spindles (three with cylindrical incised whorls)

## TOMB A-15

- 169714.....Body  
 169715.....Bunch of braids (for feathers?)

## TOMB A-16

- 169692.....Twilled basket, string, wooden peg  
 169693.....Miniature reed mat or cradle, three calabash fragments strung on it like doll  
 169694.....Four canes  
 169695.....Outside cloth wrapping of body, brownish, one hole  
 169696, 99, 707, 09, 11, 13..Six bodies  
 169697.....*a*, square cloth with four strings; *b*, copper bell; *c*, half dozen beads including one minute turquoise; with body 6  
 169698.....Two small twilled baskets containing four small sewn pouches; cane, stopped at both ends; seven small calabashes; with body 6  
 169700.....Fiber sling from head  
 169701.....Head-band of twisted skin(?)  
 169702.....Three pouches (two patterned)  
 169703.....*a*, square cloth with 4 strings; *b*, small sewn pouch; *c*, cross with red "lace"; *d*, bit of red wool; *e*, cane; *f*, cut shell; *g*, red corn ear; with body 1  
 169704.....Cloth, head wrapping of body 1  
 169705.....Cloth, outer wrapping of body 1  
 169706.....Square cloth with strings at four corners; with body 2  
 169708.....*a*, head-band and veil, red and black; *b*, square cloth with corner strings; *c*, sample of outer cloth wrapping; *d*, two cut shell beads; with body 3  
 169710.....*a*, small twilled basket; *b*, *c*, *d*, three square cloths with corner strings; with body 4  
 169712.....Six ears of maize; with body 6

## TOMB D-19

- 169718.....Body  
 169719.....Plate, red; in pieces, nearly complete

## TOMB F-20

- 169729.....Body  
 169730.....Bowl with foot, inside black (part of edge lost)  
 169731.....Pieces of plate found lying on mummy's head  
 169732.....Plain jar  
 169733.....Seven spindles (one with cylindrical whorl)  
 169734.....Four bone needles  
 169735.....Pouch

## TOMB F-21

- 169738.....Body  
 169739.....Six-cornered jar  
 169740.....Larger jar, painted black  
 169741.....Bowl with foot; design, diamonds  
 169742.....Plate; step triangle, white edge on purple-black

## TOMB F-25

- 169782.....Body

## TOMB F-26

- 169783.....Body  
 169784.....Wide plate, red-white-black stripes and arcs; from head of mummy; in three pieces  
 169785.....Four spindles (two whorls globular, one grooved, one near-cylindrical)

## TOMB F-27

- 169786.....Body

## TOMB F-28

- 169787.....Body  
 169788.....Bowl with foot, inside purple; broken

- 169789.....Jar, painted with bird figure, no handles  
 169790.....Jar, smaller, purple top, no handles  
 169791.....Large bowl, no neck

## TOMB F-30

- 169843.....Small red bowl with foot; from mummy's head  
 169844.....Large jar, painted, yellow Nazca head on mouth  
 169845.....Knob-headed wooden implement  
 169846.....Bone awl and piece of slate in a calabash  
 169847.....Yellow feather ornament on broken stick; in wrappings above head  
 169848.....Preserved portions of cloth forming a sort of false head or peaked crown  
 169849.....Fragments of rope from mummy lashings  
 169850.....Body

## TOMB NE-1

- 170241.....Large red jar, three RWB fishes  
 170242.....Pair of low bowls, red, inside purplish  
 170243.....Jar, bridge-and-spout, modeled woman, baby on head, RWB  
 170244.....Low jar, RWB  
 170245.....*a*, fragment of oblong basket; *b*, spindle with cylindrical whorl, red, yellow, white, blue

## TOMB NE-4

- 170246.....Body  
 170247.....Cloth wrappings, very rotten; brown, originally white(?)  
 170248.....Open flaring bowl, RWB circles for ornament

## TOMB NE-5

- 170249.....Body  
 170250.....Double-spout jar, RWB zigzag band  
 170251.....Round jar, one side white, other with pattern of square spiral in RWB and purple  
 170252.....Low bowl, white segments and dots on purple  
 170253.....Large sherd, perforated in middle  
 170254.....Sticks, spindles, cloth

## TOMB NE-16

- 170255.....Child's mummy lashed on mat, flat. Head crumbled

## TOMB NE-18

- 170256.....Large red jar, RWB, one large double spiral  
 170257.....Low jar or bowl, zigzag band  
 170258.....Tiny jar, black and white  
 170259.....Tiny jar, apparently unfired  
 170260a.....Two holed plates, flat, plain, unfired (one left in Lima)  
 170260b.....Pair of wooden pegs or tops(?)  
 170261.....Fragments of plain white cloth  
 170262.....Fragments of red-yellow-blue cloth  
 170263.....Bundle of split cane  
 170264.....Corn ears  
 170265.....Three calabashes, sausage-shaped (two left in Lima)

## TOMB NE-20

- 170266.....Large jar, red-white-purple, four double spirals  
 170267.....Rough reed rope on a cane, plug for 170266  
 170268.....Conical sieve, fine, red and black  
 170269.....c. twenty-five clay tubes (thirteen left in Lima)



- 170270..... Large sherd with hole
- 170271..... Mass of string or net, pebble, and peg like 170260
- 170272..... Cane with remnants of white cloth "flag"; planted behind body
- 170273..... Stick of lucma wood, broken; also planted behind body
- 170274..... Five sticks and canes
- 170275..... Four shorter canes
- 170276..... Two bundles of short canes
- 170277..... Three bundles of split canes
- 170278..... Fragment of circular wicker basket
- 170279..... Calabash, yellow paint inside

## TOMB NNE-10

- 170280..... Body of child
- 170281..... Low bowl, RWB, diagonal pattern
- 170282..... Flaring bowl, small, RWB
- 170283..... Jar, small belly, high neck, BW, crude
- 170284..... Small jar, bird's head projection, RWB, crude
- 170285..... Broken jar, wide neck, RWB, crude
- 170286..... Jar neck

## TOMB S-6

(Below S-3, which probably Late)

- 170298..... Good bowl on foot, outside red, inside purple

# APPENDIX III

## DIMENSIONS OF MIDDLE CAÑETE TOMBS, WALLS, AND BRICKS

*Measured by A. Hurtado in Centimeters*

### A—MIDDLE CAÑETE TOMB SIZES

Tomb number		Floor area interior	Height	Floor to present ground surface	Position
SSE	1	80 x 80	..	...	.....
S	1	68 x 46	..	120	.....
	2	30 x 30	45	...	30 cm. from 1
	3*-5	.....	..	...	1000 cm. from 1
	6*	60 x 60	..	200	Under 3-5
		250 x 210	..	...	1000 cm. from 6
NNE	1	30 x 30	..	100	.....
	2	65 x 65	65	...	200 cm. from 1
	3	.....	..	...	500 cm. from 1
	5	Same as 2	..	...	.....
	6	Same as 5	..	...	.....
	7	42 x 42	42	150	1000 cm. from 1
	8	Same as 1	..	...	50 cm. from 7
	9	60 x 60	60	120	400 cm. from 8
	10*	Same as 1	..	...	100 cm. from 9
	11	.....	..	...	200 cm. from 10
	12	.....	..	125	.....
	13	20 x 20	..	...	.....
NE	1*	45 x 40	60	...	.....
	2-3	60 x 60	60	...	500 cm. from 1
		215 x 180	..	300	Adjoining 1
	4*	60 x 60	60	150	.....
	5*	Same as 4	..	150	Adjoining 4
	6	.....	..	150	.....
	7	.....	..	210	100 cm. from 6
	8	.....	..	180	.....
	9	120 x 57	90	180	130 cm. from 8
	10	.....	..	240	100 cm. from 9
	11	.....	..	120	In soil
NE-(A)	12	150 x 75	85	343	Gables 50 cm. (more?)
	13	.....	..	120	In soil, above 12
	14	65 x 65	65	120	.....
	15	40 x 40	40	220	.....
	16*	45 x 40	60	260	.....
	17	60 x 48	50	220	Adjoining 15
NE-(B)	18*	150 x 102	109	345	300 cm. from 12. Gables
		.....	..	...	54 cm. (more?)
	19	45 x 45	45	...	At entrance of 18
	20*	140 x 85	140	420	200 cm. from 12. Gables
	21	.....	...	120	In soil, above 18

\* Collections to Chicago; others in Lima.

B—MIDDLE CAÑETE WALLS

Cemetery	Height	Thickness	Position
S	90	60	Parallel, 145 cm. apart
S	125	76	
S	60	81	
SSE	..	200	(1200 cm. long)
NNE	100	50	.....
NE	230	46	Parallel to next, 150 cm. distant
NE	250	90	Parallel, in contact
NE	253	28	
NE	288	60	
NE	50	50	Parallel to last, 315 (353) cm. distant
NE-A	80	40	.....
NE-A	90	40	Parallel, 110 cm. distant
NE-A	180	45	Parallel, 210 cm. distant
NE-A	220	45	Parallel, 330 cm. distant

C—MIDDLE CAÑETE ADOBE BRICKS

10 x 10 x 7.5	14 x 10 x 9
11.5 x 10 x 9	14 x 14 x 10
12 x 10 x 7.5	18 x 16 x 12
12.5 x 12.5 x 9	45 x 32 x 12 (Roof slabs, Tomb NE-12)
	52 x 24 x 13 (Roof slabs, Tomb NE-18)

## APPENDIX IV

### LATE CAÑETE TOMBS

#### 1. CERRO DEL ORO

##### SITE C

*Tomb 22.*—E of walled cemetery 150 meters; 110 cm. deep, in much disturbed and refilled soil. 169743-49: four 2-handled jars (red; red, pointed bottom; black, round-bellied, single handle on neck, good ware; black, small amphora); two cloths; two pieces of "chalk."

*Adjacent Tomb, disturbed.*—Four black jars, 169751-54, two of them inside mummy wrappings.

*Tomb 23.*—Adjacent to 22; 120 cm. deep; apparently undisturbed. 169765-69: minute black jar in mummy wrappings; woven pouch; mussel shell with paint; twelve spindles with large globular whorls incised and painted; painted spindles; spines for needles.

*Tomb 24.*—Near 22-23. Mummy seated; a guinea-pig skull with it. 169770-80: three pottery vessels, two black, one buff; large cloth in six colors, much torn; cloth and fringe fragments; thirteen spindles, some painted, five with globular incised and painted whorls; seven fragments of similar whorls; two small weaving swords, one of them rectangular; two canes filled with spines and two glued pieces of cane; two pieces of "chalk" (for rubbing on hands before twirling spindle?); cane flute, crushed; thirty small balls of red paint, five smooth pebbles, four shells, two fragments galena(?).

*Tomb 31.*—Close to 22-24. Cylindrical well, slightly tapering, adobe lined, 250 cm. deep. Halfway down, a cane roof; above this, the soil much turned over; below, undisturbed. Three bodies at bottom of well; one skull stained green at ears, one over nose and forehead. 169852-62: eight black 2-handled pottery vessels, the two smallest inside a mummy: an ear-plug of black pottery; wooden ear-plug, possibly from outside the tomb; blue paint; mussel shell with red paint.

##### SITE F

*Slid tomb material* above Middle period Tomb 28: five skeletons, four with natural heads, one somewhat flattened (169800-04); three black jars, 2-handled (169796-98); globular spindle whorl (169799).

*Tomb 29.*—Nine meters S of (Middle) Tomb 28, slightly higher on same terrace. A recumbent body, on its back, feet drawn up and turned in; lying on a few canes, wrapped in coarse cloth, 1 meter deep. Skull natural. In the wrappings, a small black jar, 169840. Appearance of this body suggested a Colonial period burial.

*Tomb* on second terrace above Middle period Tomb 28, 50 meters E and 50 S of it; 100 cm. plus deep. Teeth stained green. Black jars; basket with four large globular spindle whorls painted in incisions.

##### SITE S (HURTADO)

*Tomb 3.*—This appears to have been an older tomb re-used in Late times. It was directly above Middle period Tomb S6. Of the contents, one specimen, 170289, was a Middle period low bowl with foot, in three pieces. Everything else (170288, 170290-97) was Late: black jars, calabashes, spindle whorls, "chalk," corn cobs, clothing of the mummy, a silver headband. The skull was undeformed.

#### 2. CERRO AZUL

*Tomb 1.*—In Quebrada 2. Four adults, fourteen children and infants, nested together; more or less cemented together by salt incrustations; all flexed, but all laid down; highest only 40 cm. below surface. 169516-37: nine 2-handled jars, all black except 169523 red and 169516 with design; all but this last found singly within mummies. Copper (and silver?) in three mummy mouths; four pink shell beads still on string; red paint; seal limb bones; fragments of cloth and wool. A meager burial for eighteen individuals.

*Tomb 2.*—In upper Quebrada 1. Two adults; no objects. 169535 lay on back, head uphill, thighs spread but feet crossed, Buddha position; wrapped in much coarse folded cloth. 169539 lay with neck

by right knee of 169538, pelvis by its head, knees bent to right, feet beyond head of 169538; head of 169539 detached, near its own feet and head of 169538.

*Tomb 3.*—W front of Pyramid B, facing beach, crouching body, 169540, apparently buried naked in a sand-filled hole dug in a refuse-filled terrace now covered by slid and blown sand. Under the body was a rag with red and green stains. No wrappings on or objects with body. To N of burial a room covered with beach gravel, below which lay refuse-fill and ash. To S, in the fill or in the sand above it, were 169541-44: eighteen fragments of large heavy whitish vessel with monster design; fragmentary wooden tablet covered with bird design; a rock crystal; balance of black wood with parts of net sacks remaining (Plates LXXXIV, Fig. 1; LXXXV, Figs. 2, 4).

*Tomb 4.*—At mouth of Quebradas 8 and 8a, in level soil S of Pyramid H. A large oval tomb, partly lined, deepest part to 200 cm. below surface, containing six adult and six children's bodies, heaped and no longer separable; all twelve had copper in or about the mouth. 169584-600. Chief objects: ten jars, round and pointed bottomed, all black and 2-handled; except 169590 unhandled, red, with Late Chincha style design, much spoiled.

*Tomb 5.*—Circular, small, adjoining end of 4; 100 cm. deep. One child, laid in reeds; one black face-jar, 169583.

*Tomb 6.*—Circular, somewhat larger, next to 5 and "at entrance" of 4; 70 cm. deep. Two adults; no objects.

*Tomb 7.*—In same cemetery, nearer hill. One body; copper from skull; no other objects. 169601-02.

## APPENDIX V

### MEASUREMENTS OF SKULLS

Dr. W. D. Hambly, Field Museum, has kindly measured for me forty of the skulls brought back, thirty-eight from Cerro del Oro and two from Cerro Azul; as per the attached tabulation. These measurements were made to enable the Middle period deformation to be described more accurately.

#### CERRO DEL ORO SKULLS

Late graves	Specimen number	L	B	H	B/L	H/L	H/B
Cerro Azul 4	169598	160	136	132	85	83	97
Cerro Azul 7	169601	164	134	129	82	79	96
Near C 22	169750	178	135	133	76	75	99
Near C 22	169758	161	142	129	88	80	91
Near C 22	169759	170	124	127	73	75	102
Near C 22	169760	164	146	131	89	80	90
Near C 22	169761	170	139	128	82	75	92
Near C 22	169762	158	133	127	84	80	95
Above F 28	169800	162	126	124	78	77	98 J: p M2 i s
Above F 28	169801	170	140	131	82	77	94
Above F 28	169802	166	138	132	83	80	96
Above F 28	169803	153	132	114	86	75	86 J: BS op; p M2 i s
Above F 28	169804	155	142	118	92	76	83
Middle graves							
A 1	169609	175	164	119	94	68	73
A 1	169610	166	170	115	102	69	68
A 1	169611	168	168	116	100	69	68
A 1	169612	156	165	117	106	75	71
A 3 (4)	169634	147	158	109	107	74	69 J: p M2 i s
A 5	169638	158	171	119	108	75	70
A 6b	169671	163	148	115	91	71	78 M3 er
A 6c	169674	169	164	117	97	69	71
A 7	169647	150	169	120	113	80	71
A 9	169657	155	160	120	103	77	75
A 11	169664	166	165	127	99	77	78
A 11	169665	172	158	127	92	74	80
A 12	169680	158	147	126	93	79	86
A 13	169684	164	156	124	95	76	79
A 15	169714	167	150	126	90	75	84
A 16	169699	161	147	134	91	83	91
A 16	169707	160	144	131	90	82	91
A 16	169709	173	154	126	89	73	82
A 16	169711	164	154	127	94	77	82
A 16	169713	158	152	136	96	86	89
F 20	169729	158	152	116	96	73	76
F 21	169738	146	148	112	101	77	76 BS cl; M3 i s
F 26	169783	146	148	113	101	77	76
F 30	169850	162	168	118	104	73	70
Uncertain age							
C-D 19	169718	161	164	117	102	73	71
C	169724	149	155	120	104	81	77 M3 not er
B 18	169827	152	135	127	89	84	94 BS op; M3 er
B 17	169828	175	161	118	92	67	73

*Explanations:* J, Juvenile; BS op, cl, Basal Suture open, close; p M2, M3, permanent 2nd molars, 3rd molars; i s, in dental sacs; er, erupting.

Omitting four skulls from graves whose cultural age was not clear from the artifact contents, and three others as juvenile, we have eleven Late and twenty-three Middle period adult skulls. Some of the Late skulls are somewhat flattened occipitally; enough so that their average length of 165 mm. is probably a few mm. below what it would have been naturally. Thus their average length-breadth index of 83 perhaps represents one not far from 80 for the natural type. However, they will have to serve as an approximate standard from which to describe the deformation deviation of the Middle period. The average length is 165 mm., breadth 137, height 129.<sup>1</sup> These are obviously close to normal proportions.

In contrast, the Middle period skulls average 161.5 mm. long, 157.5 broad, 122 high. This means that they are only 3.5 mm. shorter, but 7 lower and 20 broader than the Late skulls. In nine cases out of twenty-three the breadth is actually greater than the length. These nine skulls average 156.3 mm. long, or 5 mm. less than the whole series. However, it is clear that on the whole the deformation has resulted less in shortening the skulls than in lowering them (basion-bregma measurement). The volume has been made up by a sharp increase of breadth in the rear region of the parietals. Evidently the frontal pressure was not so much fore and aft, as downward, over the whole of the frontal bone and perhaps beyond the bregma; the corresponding expansion occurred well toward the rear of the skull, but laterally, owing no doubt to a pad at the back of the head. The heads are therefore primarily flattened, with receding forehead. In local terminology they are, correctly enough, *chata* (flat).

<sup>1</sup> With a larger series, the wholly undeformed skulls could be selected by eye and measured to ascertain the natural type of the area.

# APPENDIX VI

## MIDDLE CAÑETE TEXTILES

BY

LILA M. O'NEALE

The twenty-three specimens comprising the Middle period textile collection from Cerro del Oro, Cañete, are more or less determinable as follows: garment fragments (169678a, b; 169848; 170262a-d; 170322); a veil or scarf (169704); kerchiefs (169710a-d); band (169660); bag (169702); pouches stuffed with coca leaves (169698e-g); rectangular webs for pouches(?) (169698c, d); maguey sling (169700); miniature shirt (169697a); objects of unknown use (170262e).

### YARNS

All yarns, of whatever ultimate size and strength, are spun as single plies or strands. Subsequently these may be combined into 2-ply, 3-ply, or even larger yarns. The ancient Peruvian weavers usually wove with 2-ply yarns twisted slackly, medium tightly, or tightly. It is rare to find a 2-ply yarn spun to the crêpe stage. On the other hand, almost all single-ply weaving yarns were given an extra amount of twisting in order to render them strong enough to stand the strain of tension in the loom. It seems, also, to have been customary to give crêpe twist to weft yarns, although they required little strength.

The all-cotton fabrics (including the maguey sling) are to the all-wool fabrics in the Cerro del Oro collection as 16: 7. There are no specimens into which both cotton and wool yarns enter.

The number of warps and wefts per inch in a fabric is called the count. Count varies with the size of the weaving yarn and the density of the material. Usually, ancient Peruvian fabrics are warp face: the number of warp yarns within the inch unit is appreciably larger than the number of wefts within the unit. This tendency for the warps to be more closely set in the loom than the wefts, which are battened into place by a sword device, is illustrated by the warp counts arranged in sequence, beginning with the lowest in each group:

COTTON FABRICS				WOOL FABRICS			
Warps per inch		Wefts per inch	Excess of warps	Warps per inch		Wefts per inch	Excess of warps
16	x	10	6				
18	x	16 <sup>1</sup>	2				
22	x	16 <sup>2</sup>	6				
26	x	16	10	24	x	16	8
28	x	14	14	24	x	16	8
28	x	28	..	26	x	22	4
32	x	12	20				
32	x	12	20	32	x	18	14
32	x	14 <sup>2</sup>	18				
32	x	20	12				
32	x	30 <sup>2</sup>	2				
34	x	16	18				
36	x	16	20				
38	x	12 <sup>1</sup>	26	56	x	16	40

<sup>1</sup> An average taken of several counts made at different places in the fabric.

<sup>2</sup> Single-ply cotton yarns.



## TECHNICAL FEATURES

The Cerro del Oro collection of textiles, although small, contains several fabrics with technical features characteristic of those from other relatively early sites.

### WARP-WEFT TECHNIQUES

It is to be expected that a large proportion of the cloths of any period or site are examples of plain weave or its variations. Of the twenty-three Cañete pieces, eighteen are in this category with these differences: fifteen are of the type in which single warps are crossed by a single weft element; one is half-basket type, that is, pairs of warps are crossed by a single weft element (169678a); and two specimens are of the warp-and-weft interlocking type (170262b and 170322). This technique is explained in the analysis of the latter specimen.

The twills are notable from the standpoint of their rarity in any period and site. Possibly the two large fragments (169678a, b) were originally parts of the same web. Hand weavers have a disconcerting manner of changing techniques within the same warp set-up; fragments do not always tell the whole story of the original fabric. The twilling in the Cañete piece is done as by any modern weaver, although the herringbone arrangement is conceivably a step beyond that in which the wale runs in one direction only.

There are no tapestry specimens in the Cañete lot, although two pieces have features characteristic of that plain weave variation: the miniature shirt, specimen 169697a, with its neck opening made in the manner of a Kelim slit, and the maguey sling, specimen 169700, which has a short length of figure-8 weaving like that done for narrow bars of contrasting color in Kelim tapestries.

### SINGLE-ELEMENT TECHNIQUES

Two specimens illustrate the form of fabrication by means of a single set of active elements. One is 169660, a band made by manipulating parallel strands, possibly hanging from a support, or possibly fastened at their ends within a frame. The process might be called multiple parallel twining. If such strands, worked in pairs, are always turned to the right, or to the left, the effect is similar to twilling. In the Cañete specimen, the twining of adjacent pairs toward each other, counterpairing them, gives an effect similar to knitting. The texture is close.

The second single-element specimen, sling 169700, is 3-strand plaiting throughout.

### EDGE FINISHES

The nature of the fragments and complete specimens, as may be seen from the list, precludes opportunities for much decoration. The maguey sling, 169700, has a tassel; one of the warp-and-weft interlocking specimens, 170322, has a fringe added to the end of the woven web just as if more weaving were to be done; and the bag, 169702, has a 1-loop needle-knitted binding which serves both as seaming and decoration for the bottom. No one of these three details is unusual, or more characteristic of one period than of another.

The only stitchery of a seaming type is that shown on the three specimens 169698e-g, small pouches stuffed with coca leaves, and that up the sides of the miniature shirt, 169697a. The whipping stitch, as it is called, is a very elementary over-and-over stitch, which retains its name whether done coarsely as on these specimens, or with great care as in joining breadths of material for some of the large mantles from Early to Inca periods.

### VARIOUS DEVICES

Special mention should be made of specimen 169702, a bag, which apparently was warped after a manner to produce a ring. The analysis gives the probable method in detail.

Tie-dyeing is also unusual, especially in the Early period. Color, design elements, and the general effect of cotton fragments 170262a are all typical of the technique.

Drawing in, or warping, for color changes is familiar among Early Nazca specimens, both cotton and wool. The Cañete lot contains a single example, the wool bag previously mentioned, 169702. Its range of colors suggests that the available dyes were probably more varied than the rest of the small collection indicates.

## SPECIMEN ANALYSES

The generalizations made in the above paragraphs are based upon the detailed analysis of each specimen given in this section.

- (1) Specimen A9-169660:<sup>1</sup> band fragment 6" x 3" (full width). Plate LXXXVIII, Fig. 2.

*Construction:* multiple parallel twining, similar to some lace techniques. The set-up for the twining requires 72 yarns per inch. These are manipulated in fours, each of the inner two elements of the four being turned away from the center and over the outer two elements. A detail of the counterpairing is shown in Plate LXXXVIII, Fig. 2a. The construction of this band is identical with that used for the narrow bands or ribbons of the Early period at Nazca (Majoro, Nazca 170476c, e). The arrangement of the colors and the number of yarns necessary to develop the pattern in the Cañete specimen follows the order given:

BROWN	ORANGE	TAN	ORANGE	TAN	ORANGE; repeat
8	6	8	6	8	6

*Yarns:* 2-ply wool yarn, dyed, slack-to-medium twist.

*Design and color:* zigzag lines and diamond shapes in three colors.

- (2) Specimen A12-169678a: garment fragment 8½" x 19" (full width).

*Construction:* plain weave variation of the half-basket type in which pairs of warps are crossed by a single weft. The weave for the end border (2½" wide) changes to herringbone twill, 2 warps up, 2 warps down, and repeat (Plate XC, Fig. 3).

*Yarns:* 24 warps by 16 wefts per inch.

2-ply wool, natural brown (llama?), and dyed, medium twist.

*Design and color:* main web dark Brown; stripes of 4 Yellow yarns, 4 Red, 4 Yellow, 10 Red on the side edges. Two very heavy loomstrings of light wool edge the end of the web.

- (3) Specimen A12-169678b: garment fragment 22" x 19" (full width).

*Construction:* twill, herringbone type; 2 warps up, 2 warps down, as shown in the flat-view diagram, Plate XC, Fig. 3, for 169678a.

*Yarns:* 24 warps by 16 wefts per inch.

2-ply wool, natural brown (llama?), and dyed, medium twist.

*Design and color:* main web dark Brown; stripes as in 169678a; loomstrings lacking.

- (4) Specimen A16-169697a: miniature shirt with neck and armseye openings, 5½" x 5". Complete web as woven, 11" x 5".

*Construction:* plain weave; 3 heavy loomstrings at each end of the web. At the bottom of the neck opening, on one side only, there are two wefts of yarn of loomstring size. The reason for putting across these two wefts and turning back the ends is not clear (Plate LXXIX, Fig. 7).

Kelim neck opening on the lengthwise center, 2½" long. This opening is made by turning the regular weft on adjacent warps as in regular Kelim tapestry.

Whipping stitches up sides, taken very deep and far apart, with ends knotted at armseye openings.

*Yarns:* 32 warps by 20 wefts per inch.

2-ply cotton, Brown, slack-to-medium twist.

*Stitchery thread:* 4 2-ply cotton yarns twisted together.

*Color:* natural brown of the cotton.

<sup>1</sup> A9-, and similar prefixes, indicate the site and tomb.

(5, 6) Specimens A16-169698c, d: complete webs for pouches(?),  $7\frac{1}{2}$ " x 4" and 8" x 5".

*Construction:* plain weave. Heavy loomstrings across both ends of each web.

*Yarns:* c, 32 warps by 12, 14, 16 wefts per inch.

Single-ply cotton, White, hard twist.

d, 16-18-20 warps by 16 wefts per inch.

2-ply cotton, Brown, hard twist.

*Color:* White and Brown of the weaving yarns.

(7-9) Specimens A16-169698e-g: pouches stuffed solid with coca leaves,  $5\frac{1}{2}$ " x  $3\frac{1}{2}$ ";  $4\frac{1}{2}$ " x  $2\frac{1}{2}$ "; and 4" x  $2\frac{1}{2}$ " (Plate LXXXIX, Fig. 1).

*Construction:* plain weave. Heavy loomstrings at two ends of each web.

Whipping stitches close the sides and more or less draw together the top edges of the pouches. Specimen 169698g is better constructed than the other two specimens.

*Yarns:* e, 36-38-40 warps by 12 wefts per inch.

2-ply cotton, White, hard twist.

f, 32 warps by 12 wefts per inch.

2-ply cotton, White, hard twist.

g, 36 warps by 16 wefts per inch.

2-ply cotton, White, hard twist.

*Color:* all White.

(10) Specimen A16-169700: sling, throwing type, 74" (complete length).

*Construction:* plaiting, 3-strand. The center portion, a long oval, consists of two fairly large outside plaits. Within these are four smaller 3-strand plaits each of which is begun by looping the necessary maguey fiber lengths through the inner side of the main plaits (Plate XC, Fig. 2). These two smaller plaits are joined to the outer ones only; the other two plaits forming the center are begun in the same manner as described, are braided independently for about an inch, combine into a single plait, separate to make two plaits for almost three inches, combine as one, and finally separate to disappear into the main plaits. The effect is similar to network. More maguey strands are added to augment the size of the combined outer plaits for the cord ends.

Tassel: at the final of one end a tassel is made by looping untwisted maguey strands through the last twists of the plait, then tying the braid ends about them. The lower ends of the tassel strands have been drawn together, divided into two sections, and woven over, figure-8 fashion. A finger loop finishes the other end of the sling cord.

(11) Specimen A16-169702: bag,  $6\frac{1}{2}$ " x  $5\frac{1}{2}$ ". Complete web, 11" x  $6\frac{1}{2}$ ". Plate LXXXVIII, Fig. 1.

*Construction:* plain weave, warp stripes. The specimen seems to indicate a method of warping known to various South American tribes,<sup>1</sup> but rarely used by ancient Peruvian weavers. I know of no other example from any other coastal period or site. The warp yarn seems to have been wound around a frame or small object in such a manner as to form a seamless tubular band with selvages top and bottom. The Cañete specimen has a key loomstring. The warp, first fastened to this heavier crosswise string, passes around the supporting frame  $5\frac{1}{2}$ " long, first to the left, let us say, coming again to the loomstring from the right. The warp turns about the loomstring, is carried to the right around the object, and comes to the loomstring from the left. Warping done in this manner is similar to a lacing process. The key loomstring in the Cañete specimen is still in its original position, with four warp loops coming from, turning about, and returning to the left, followed by four warp loops coming from, turning about, and returning to the right. The detail drawing suggests much more space between the yarn groups than exists in the actual fabric (Plate LXXXVIII, Figs. 1a, 3).

Drawing in for colored stripes: the stripes vary from a few threads in width to about  $\frac{1}{4}$ ". The arrangement of colors gives the appearance of a maintained sequence without really being one. Brown yarns alternate with whatever color or group of two colors is used. At approximately regular intervals these groups of Brown and Rose, or Brown and Blue, or Brown and Golden Brown yarns are set up alter-

<sup>1</sup> Erland Nordenskiöld, *Comparative Ethnographical Studies*, vol. 2, pp. 174-177, Fig. 55, Göteborg, 1920; Ronald Olson, *The Possible Middle American Origin of Northwest Coast Weaving*, *American Anthropologist*, vol. 31, pp. 114-121, 1929.

nately. Since all the odd yarns come up on the first pick, and all the even yarns come up on the second pick, cross stripes of solid color result.

Needleknitting: a binding one loop wide is worked over the edges forming the bottom of the bag. This embroidery stitch, characteristic of the textiles of all periods on the coast, may be done with a sewing needle, and gives strength as well as decoration to seamed edges. The method of making can best be understood from the drawings (Plate LXXXVIII, Figs. 1a, 3).

*Yarns:* 56 warps by 16 wefts per inch.

2-ply wool, natural(?) dark Brown and dyed, slack-to-medium twist.

*Design and Color:* stripes of dark Brown, Golden Brown, Rose, Blue. Needleknitting in blocks of same colors.

(12) Specimen A16-169704: veil or scarf, 52" x 17", complete.

*Construction:* plain weave. The appearance of fine pieces like this specimen gives the impression that selvages were formed of warps more closely set than those of the remainder of the web. It is doubtful, however, that the six extreme edge warps were deliberately set closely. In manipulating wefts it is almost impossible to prevent the edges from pulling in slightly, and when they do, the outer warps are drawn together. The last 7" to 8" of weaving was very loosely battened. Usually the ends of ancient Peruvian weavings are lacking in any distinguishing feature which might give a clue to the beginning or ending of the work.

*Yarns:* 18-26 warps per inch by 14-20 wefts per inch.

Single-ply cotton, White, medium twist.

*Color:* White.

(13-16) Specimens A16-169710a-d: small cotton webs of unknown use, possibly for pouches or kerchiefs. a, fragment 9½" x 5" (full width); b, 10½" x 5" (complete); c, 10" x 8½" (complete); d, 28" x 11" (complete).

*Construction:* plain weaves of more or less open texture. The battening is very slight within the last half of specimens 169710b, c; all of 169710d is loosely woven.

*Yarns:* There is a noticeable irregularity in the amount of twist given to the yarns. Within the same warp or weft length the range is from slack to hard twist.

a, 26 warps by 16 wefts per inch.

2-ply cotton, White, slack twist.

b, 32 warps by 12 wefts per inch.

2-ply cotton, White, hard twist.

c, 28 warps by 14 wefts per inch.

2-ply cotton, White, slack to hard twist.

d, 16 warps by 10 wefts per inch.

2-ply cotton, White, slack to medium twist.

*Color:* all White.

(17) Specimen F30-169848: fragments of a garment 30" x 29" and 32" x 35".

*Construction:* plain weave. Three heavy loomstrings of medium Blue cotton yarn edge the end of one of the fragments. These two fragments represent wide weavings of the period and locality, since in neither fragment are the two side selvages present.

*Yarns:* 28 warps by 28 wefts per inch.

2-ply cotton, White and natural brown, medium twist.

Loomstrings: 3-ply cotton, each ply double.

*Color:* White, and dyed Blue.

(18) Specimen NE18-170262a: small fragments of cotton cloth.

*Construction:* plain weave.

Tie-dyeing.

*Yarns:* 32 warps by 30 wefts per inch.

Single-ply cotton, resist dyed, crêpe twist.

*Design and Color:* the small Blue scraps show the usual white squares with rounded corners and center dots common to the tie-dyeing from all areas. The dots seem to have been arranged in arcs, squares, possibly circles, all of which are familiar motive shapes in cloths of this type (Plate LXXXVIII, Fig. 4).

(19) Specimen NE18-170262b: small fragments of wool cloth.

*Construction:* plain weave, regularly interlocking warps and wefts. The method of interlocking is explained in detail under specimen 170322 (p. 273).

*Yarns:* 24-26 warps by 22 wefts per inch.

2-ply wool, dyed, slack twist. Singles tightly twisted, the doubling into 2-ply slack twist.

*Design and Color:* similar in both respects to specimen 170322.

(20) Specimen NE18-170262c: small fragments of cotton cloth.

*Construction:* plain weave.

*Yarns:* 34 warps by 16 wefts per inch.

2-ply cotton, White, medium twist.

*Color:* White.

(21) Specimen NE18-170262d: mass of 2-ply cotton yarn, White and natural brown, loosely spun.

(22) Specimen NE18-170262e: fragments of small reeds(?), or bundles of woody fibers wrapped closely with 2-ply White and Red wool yarns (Plate XC, Fig. 1).

(23) Specimen NE18-170322: fragments 28" x 20" (full width) with 3" fringe; 20" x 36" (whole 20" width plus 16" fragment sewn together).

*Construction:* plain, with regularly interlocking warps and wefts. The technique is that used for multicolored patchwork fabrics of the Early Nazca, Paracas Neeropolis, and Middle periods on the coast.<sup>1</sup> The method of making seems to have required scaffolding or skeleton wefts placed at intervals of  $\frac{3}{4}$ " approximately. Warps were strung over these to make one unit of the geometric pattern; warps on the same plane interlocked end-to-end to form an adjacent pattern unit. The setting-up of the warps determined both the design shapes and the color arrangement, since wefts of the same color as the warp set-up crossed each design unit. In the Cañete specimen there are no vestiges of these skeleton yarns remaining in place. Plate LXXXIX, Figs. 2a, 2b, 2c, shows design and technique.

*Fringe:* the 3" fringes at the bottom of the garment were made at the same time as the web. Each yarn was looped between a warp yarn in the same plane as if to be used for an additional design unit, and a skeleton weft yarn at the required depth, subsequently removed. Four doubled wefts cross the fringe warps. The loop ends were left uncut.

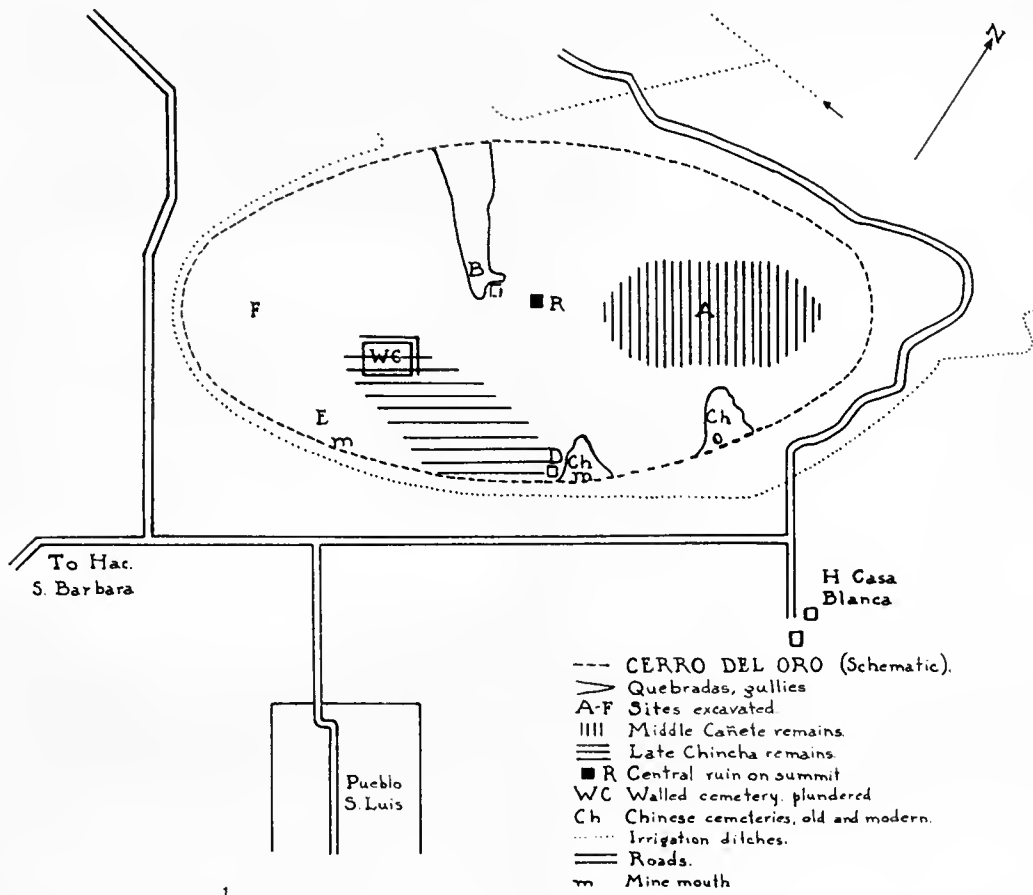
*Yarns:* 32 warps by 18 wefts per inch.

2-ply wool, dyed, medium twist.

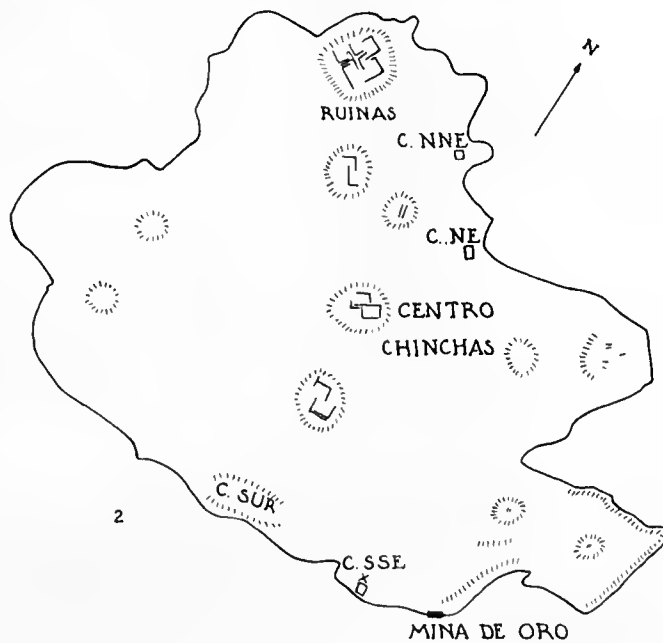
*Design and Color:* parts of three large motives remain. The center detail of each motive is a cross, bordered by three  $\frac{1}{2}$ " bands. On each side an arrangement of checkered motives elaborates the cross. Colors are the familiar Peruvian Brown and Red, a dark Blue, and Yellow.

<sup>1</sup> A Peruvian Multicolored Patchwork, American Anthropologist, vol. 35, pp. 87-94, 1933.



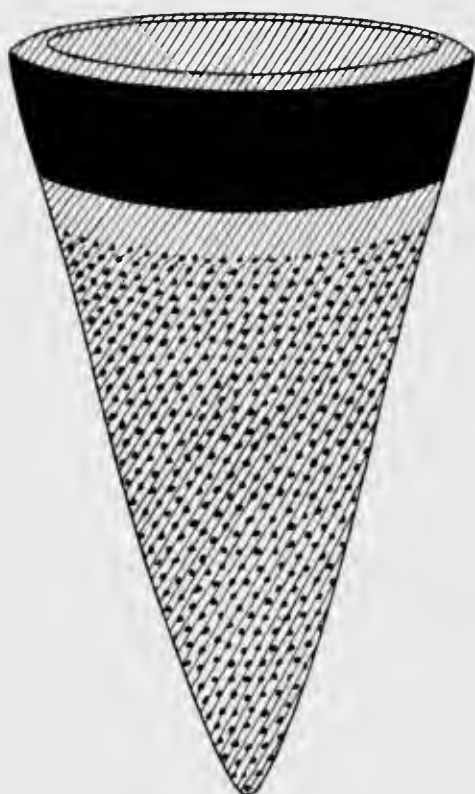


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CERRO DEL ORO, PLANS



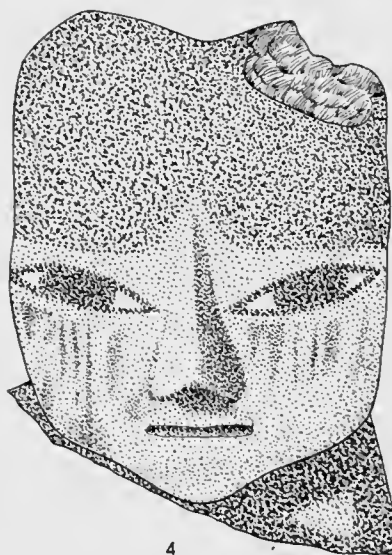
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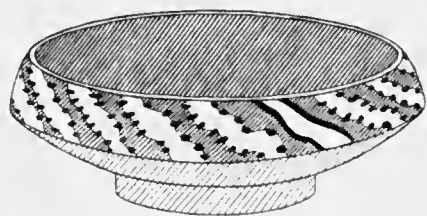


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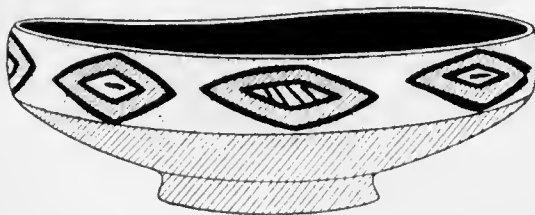


MIDDLE CAÑETE POTTERY FROM CERRO DEL ORO

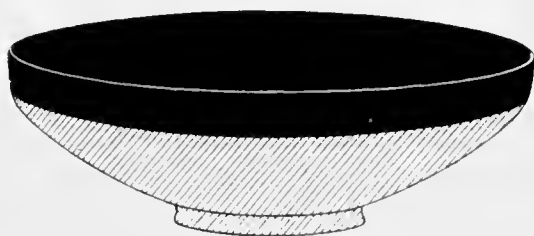




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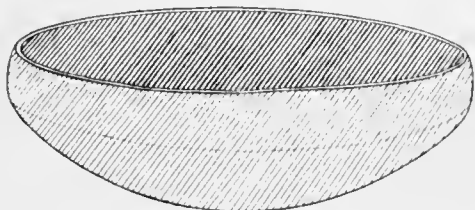
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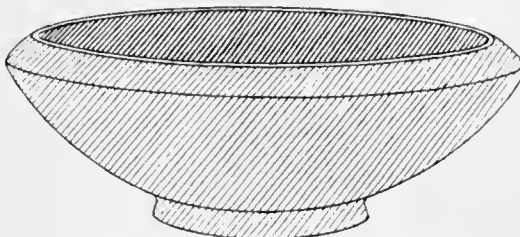
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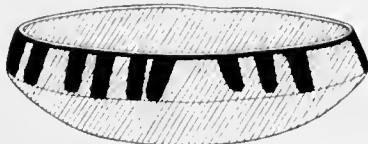
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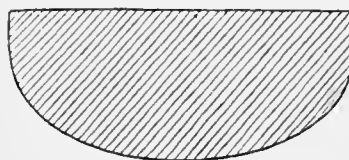
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MIDDLE CAÑETE POTTERY FROM CERRO DEL ORO  
LOW BOWLS, WITH AND WITHOUT FOOT



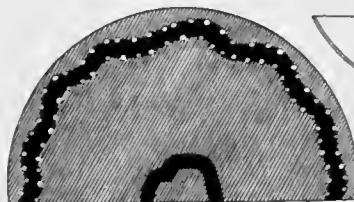
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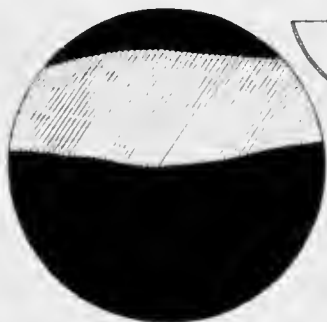
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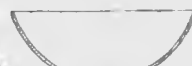
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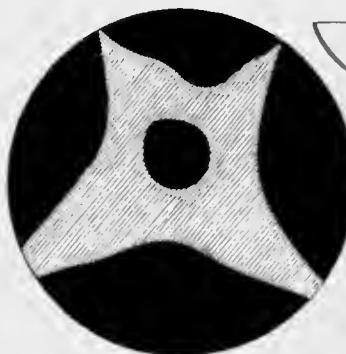
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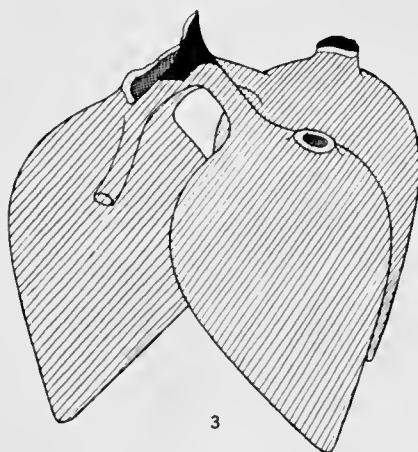
MIDDLE CAÑETE POTTERY FROM CERRO DEL ORO: PLATE-SHAPED BOWLS



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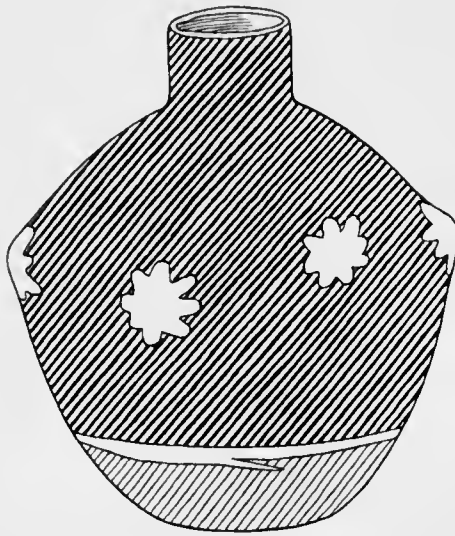


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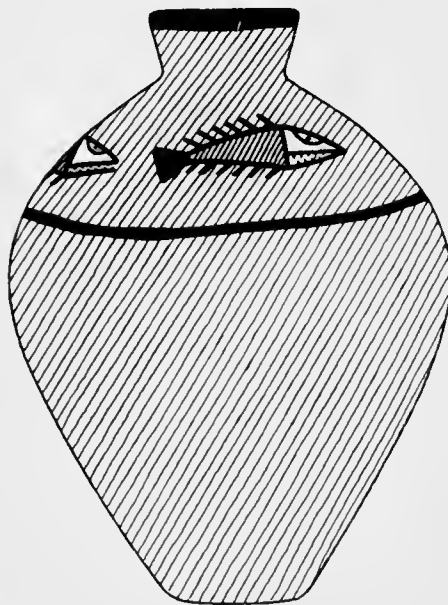
MIDDLE CAÑETE POTTERY FROM CERRO DEL ORO: DOUBLE-SPOUT JARS



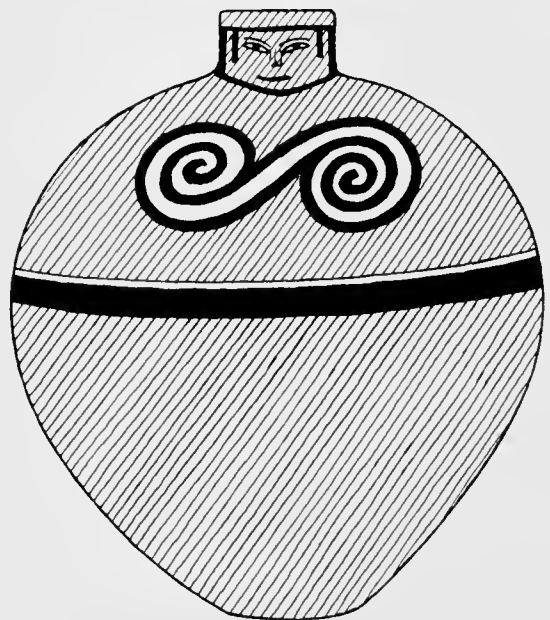
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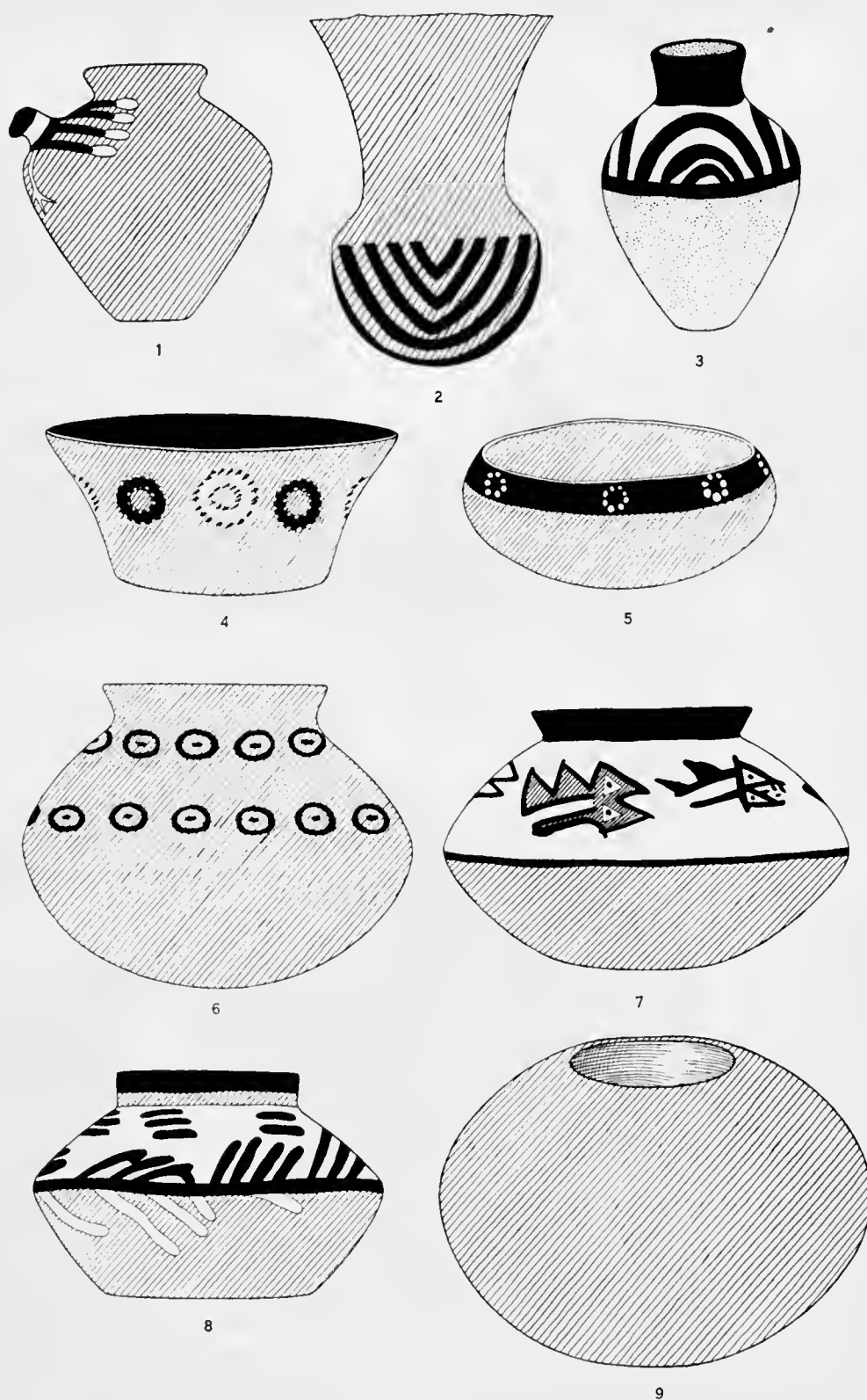


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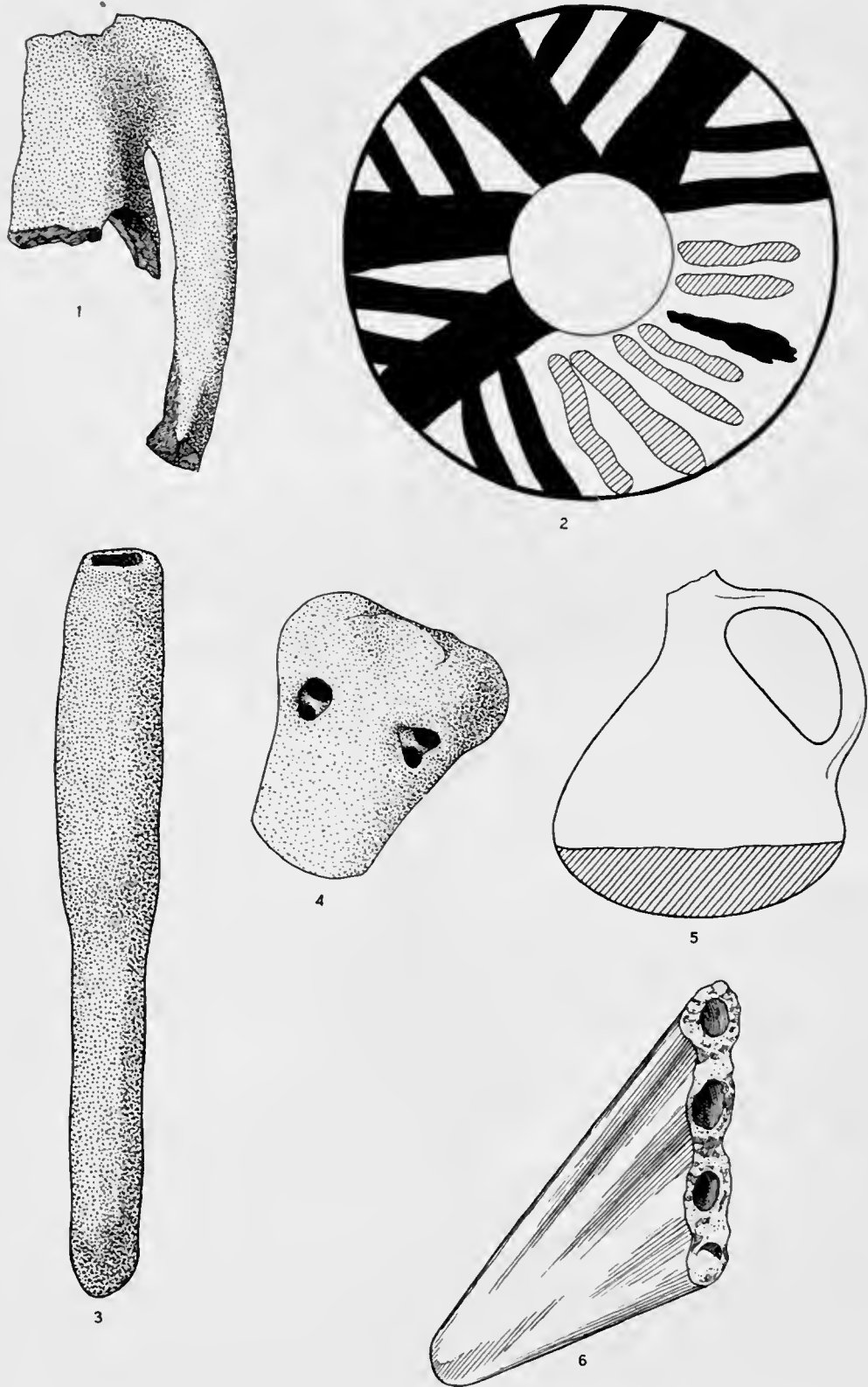


4

MIDDLE CAÑETE POTTERY FROM CERRO DEL ORO: JARS



MIDDLE CAÑETE POTTERY FROM CERRO DEL ORO: SMALL JARS AND BOWLS



MIDDLE CAÑETE POTTERY FROM CERRO DEL ORO: VARIOUS OBJECTS



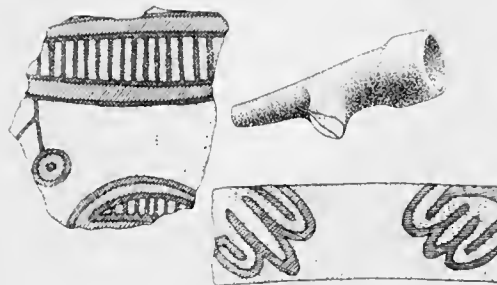
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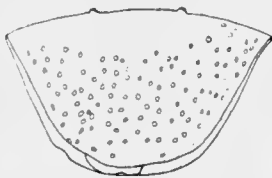
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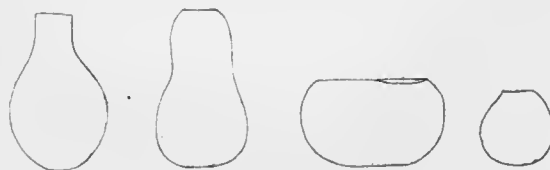
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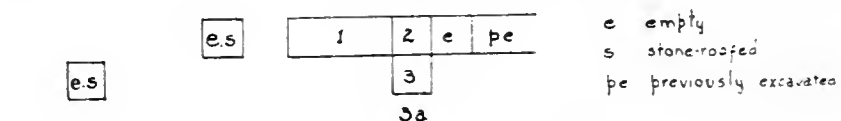


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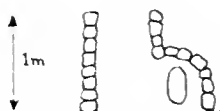


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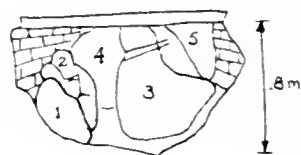
MIDDLE CAÑETE POTTERY FRAGMENTS, BELL, AND GOURDS



SITE A TOMBS 1-3a



TOMB A3  
2

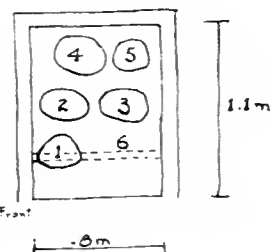


Adobe Walls

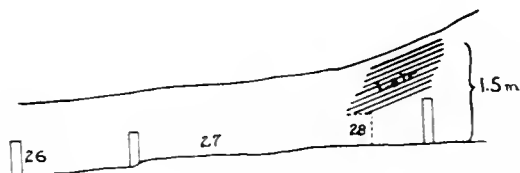
Beam

Stone Roof

Adobe + Stone Front



TOMB A16  
3

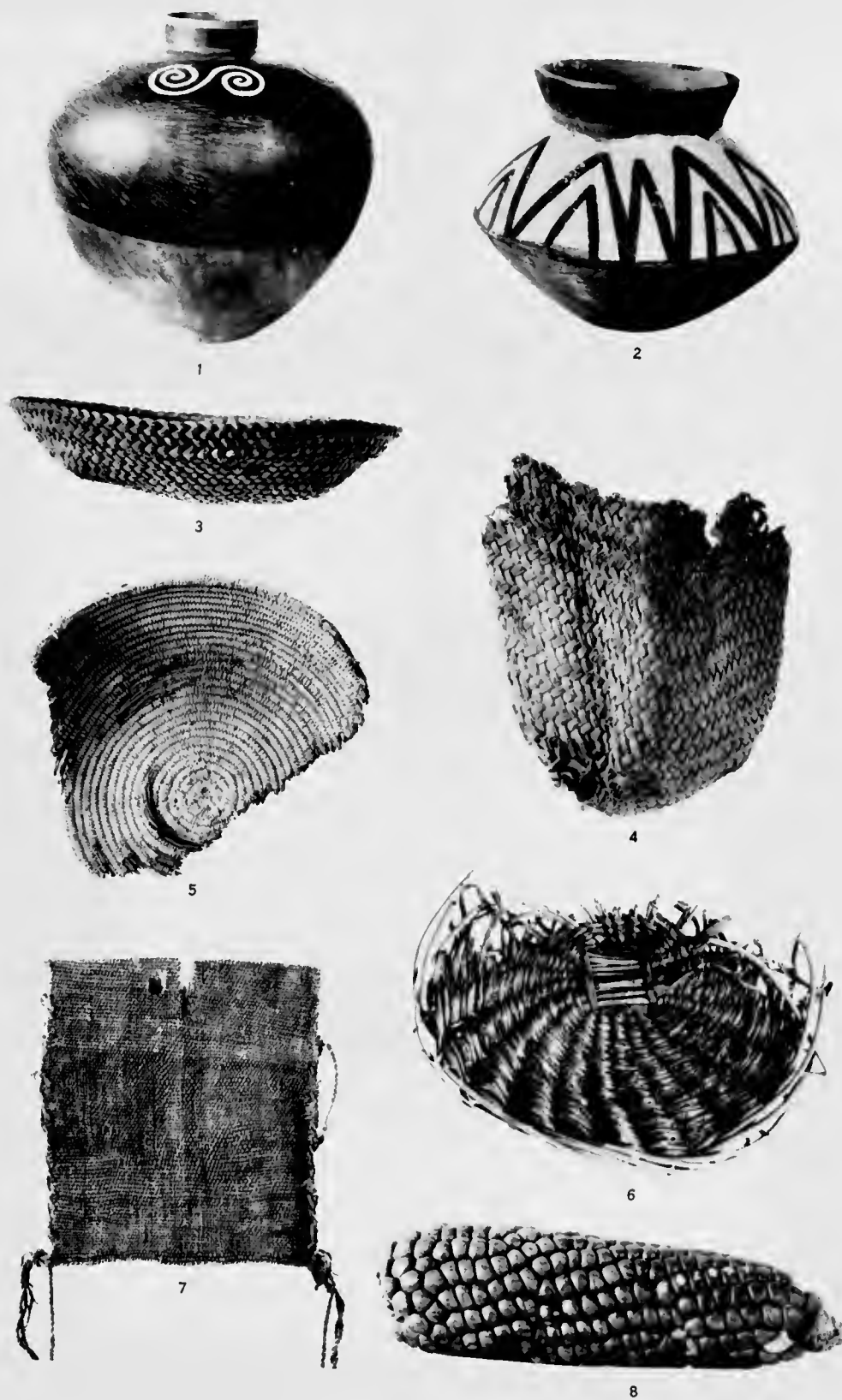


TOMBS F 26-28  
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15

MIDDLE CAÑETE TOMBS ON CERRO DEL ORO





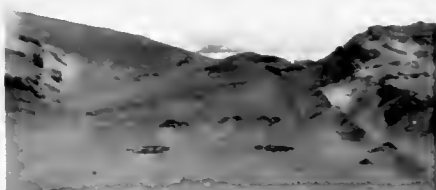
MIDDLE CAÑETE JARS, BASKETRY, MINIATURE SHIRT, AND MAIZE



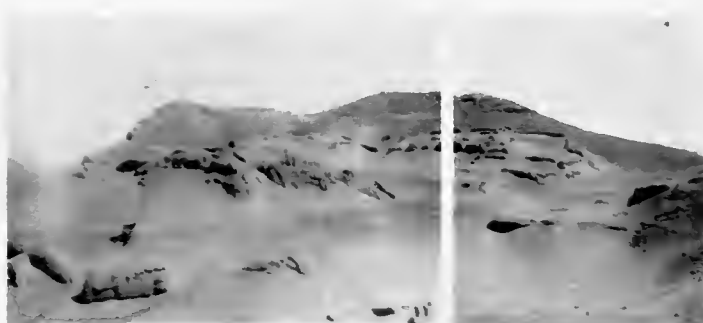
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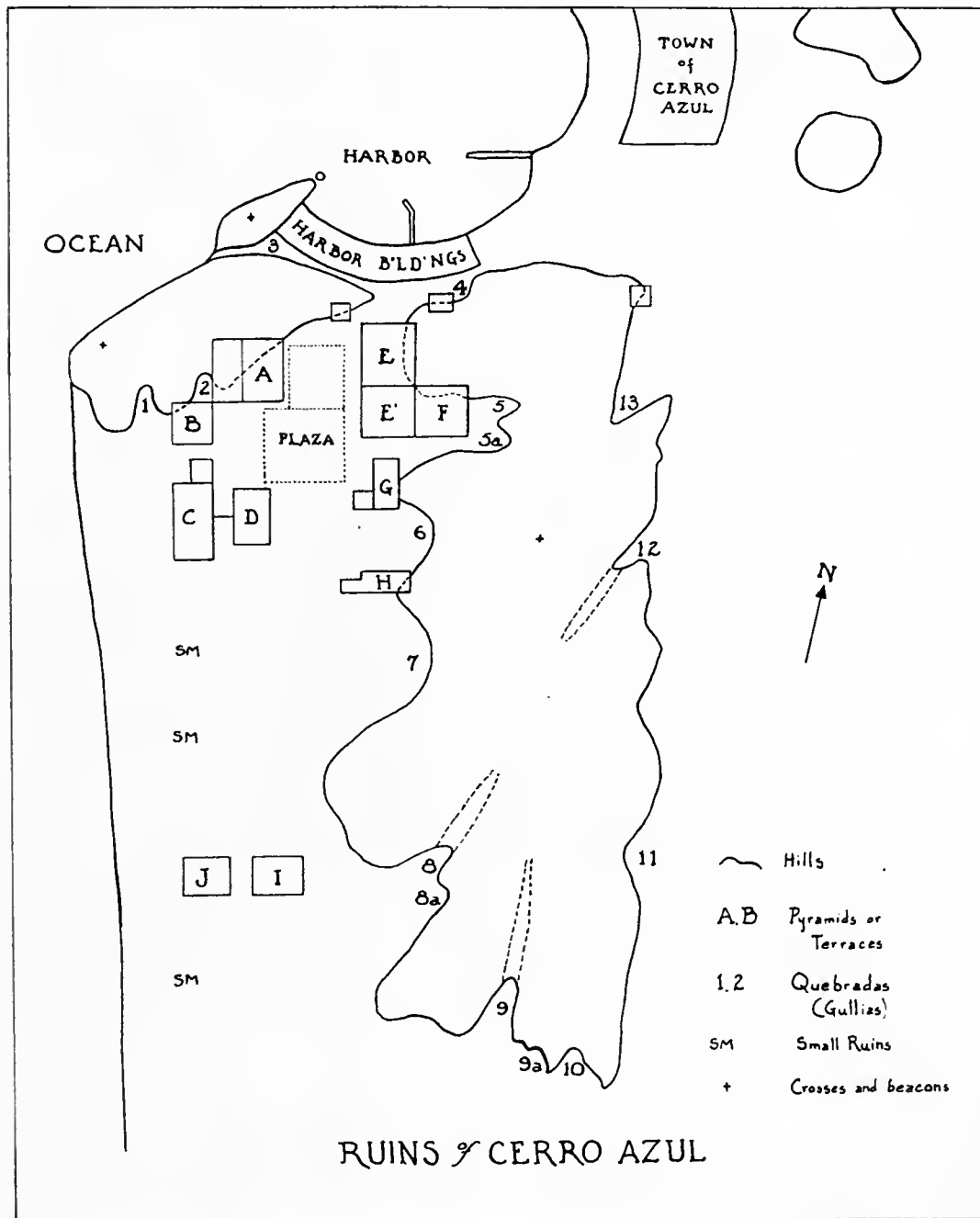


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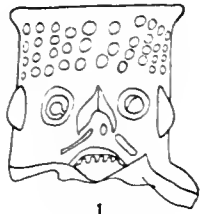


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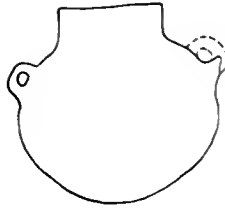
CERRO AZUL, VIEWS



SKETCH OF LATE CAÑETE (CHINCHA) RUINS AT CERRO AZUL



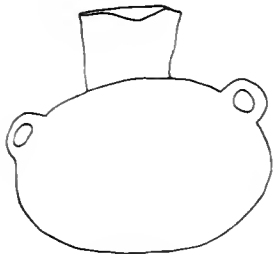
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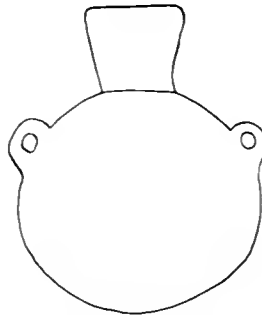
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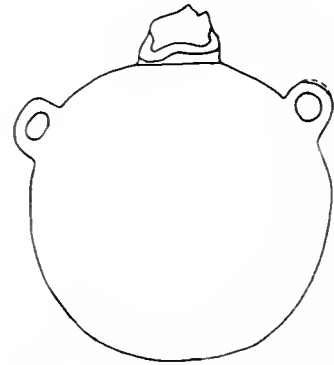
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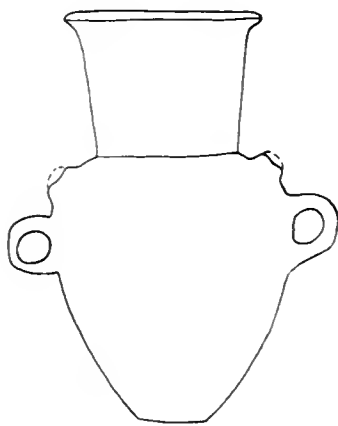
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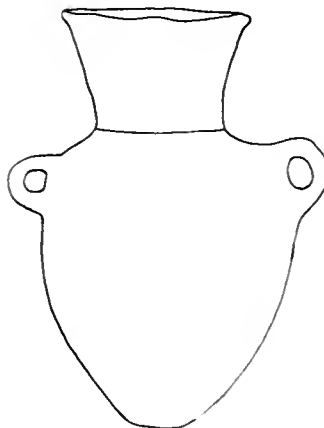
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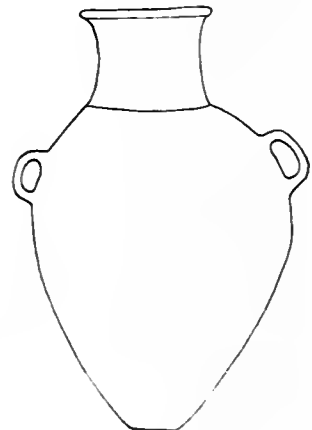
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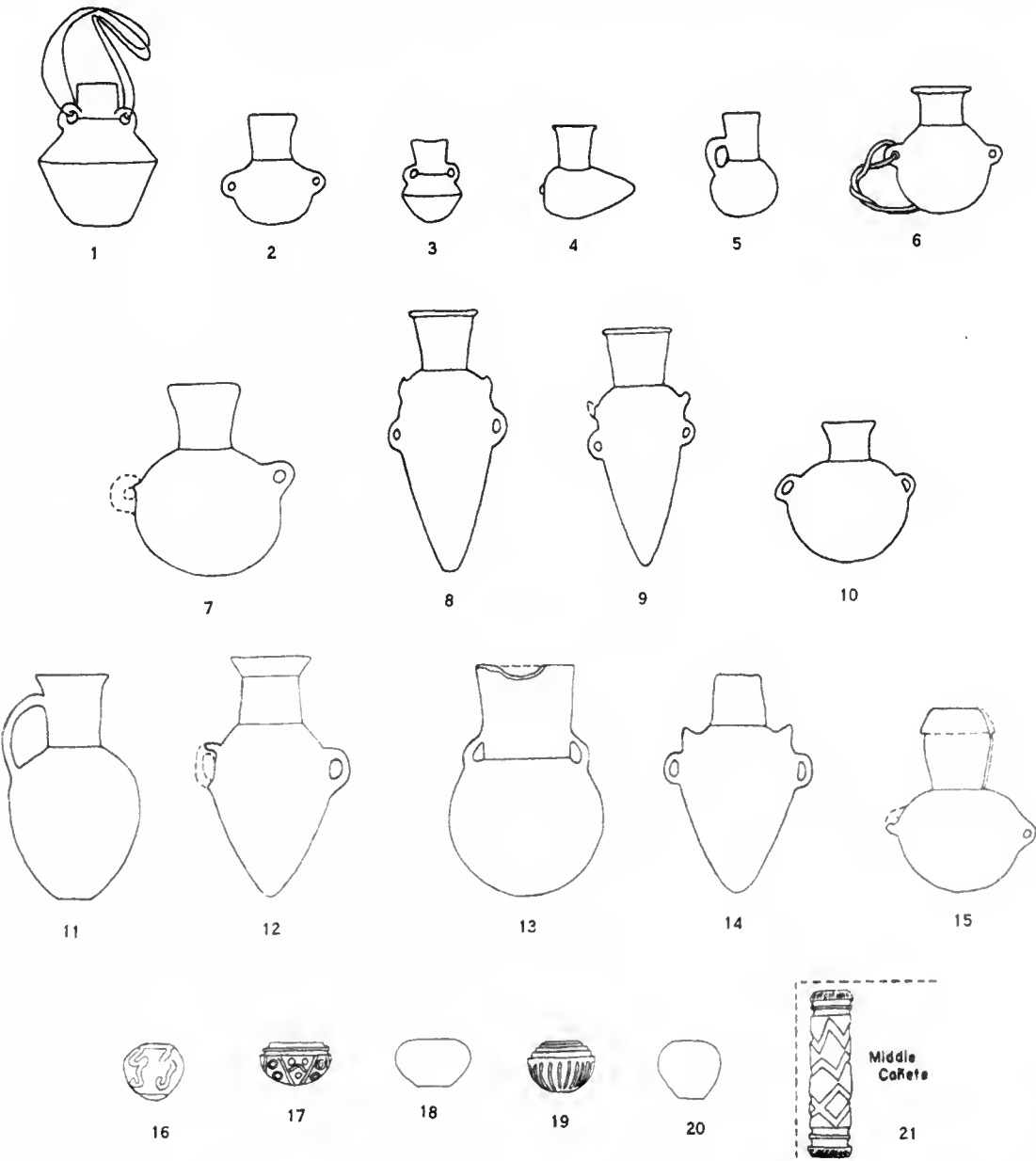


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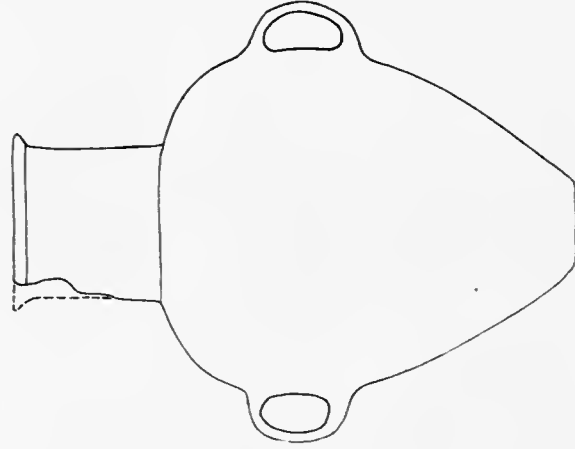
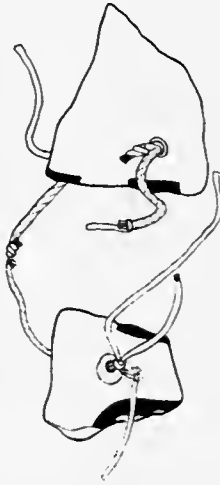
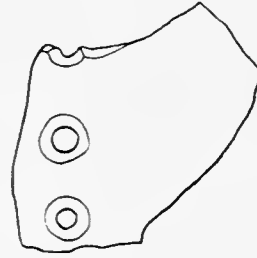
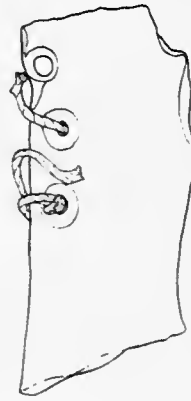
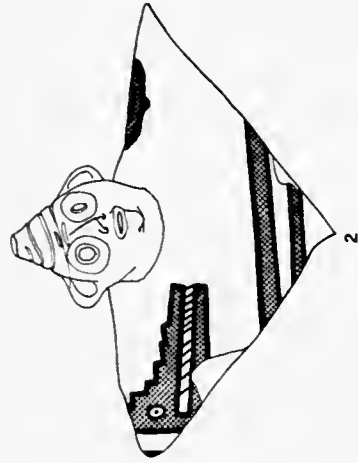
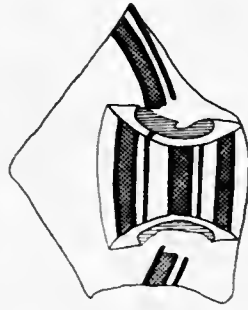


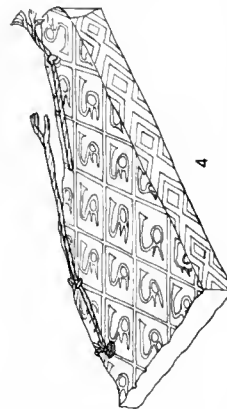
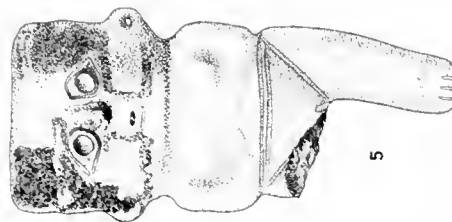
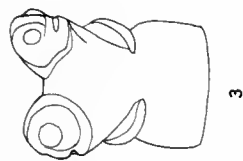
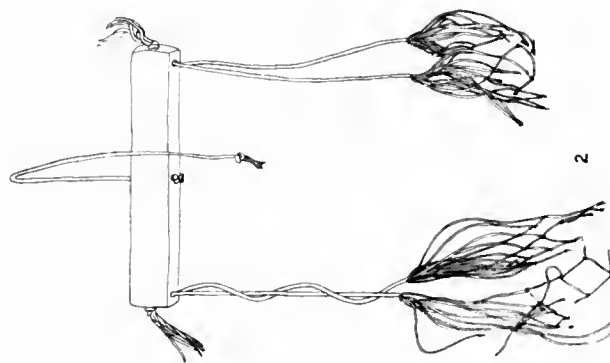
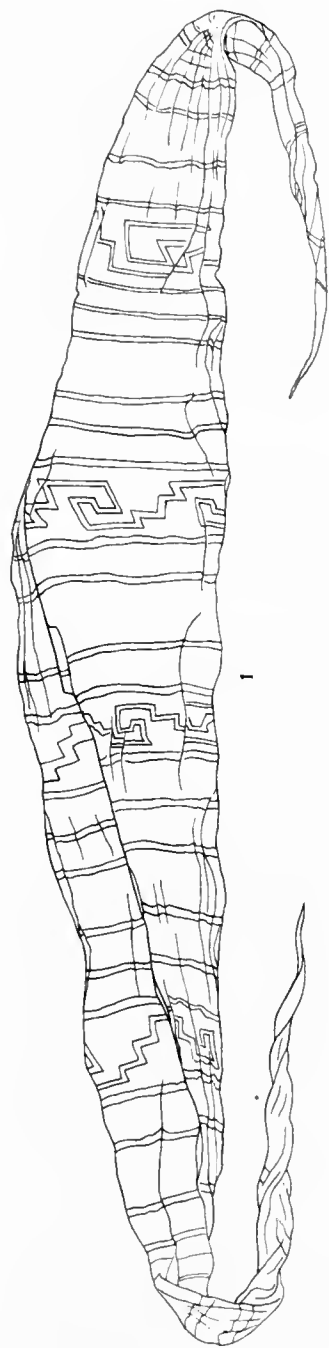
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LATE CAÑETE AMPHORAS AND JARS FROM CERRO AZUL AND CERRO DEL ORO

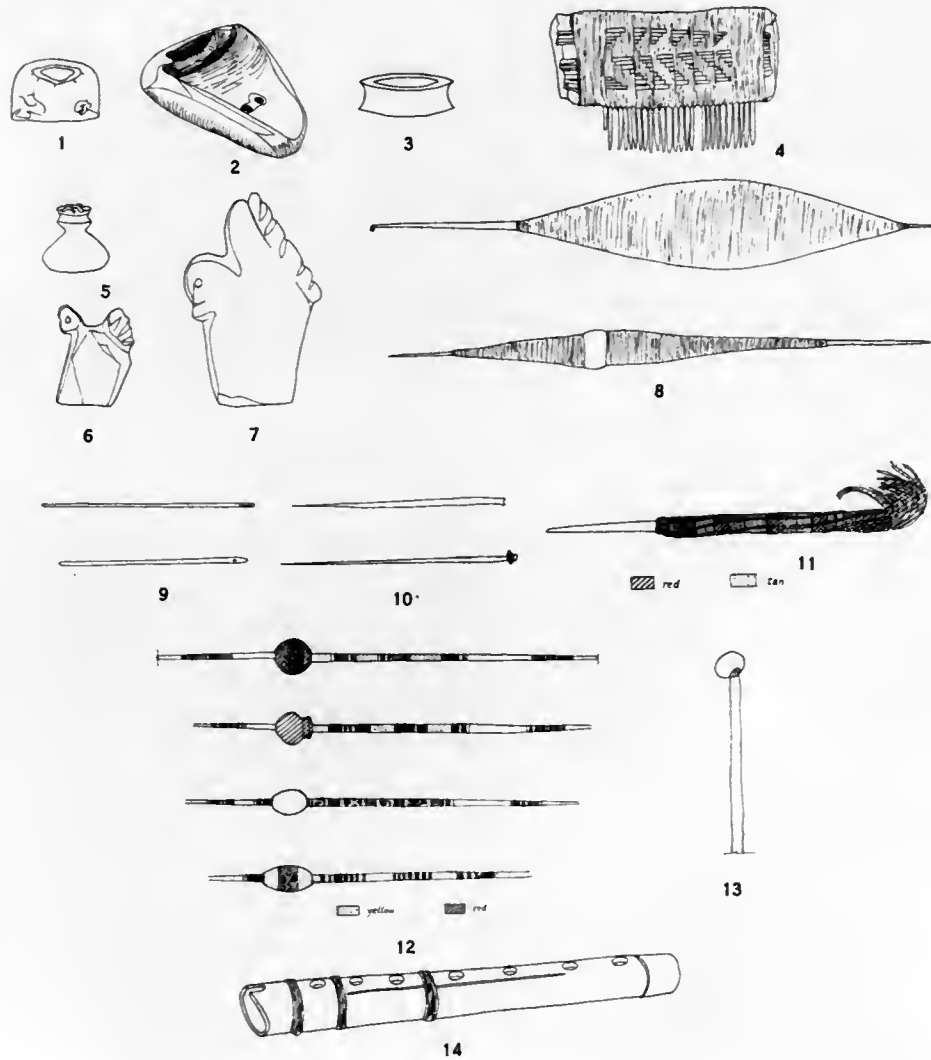


LATE CAÑETE JARS AND SPINDLE WHORLS AND MIDDLE PERIOD WHORL  
FROM CERRO AZUL AND CERRO DEL ORO



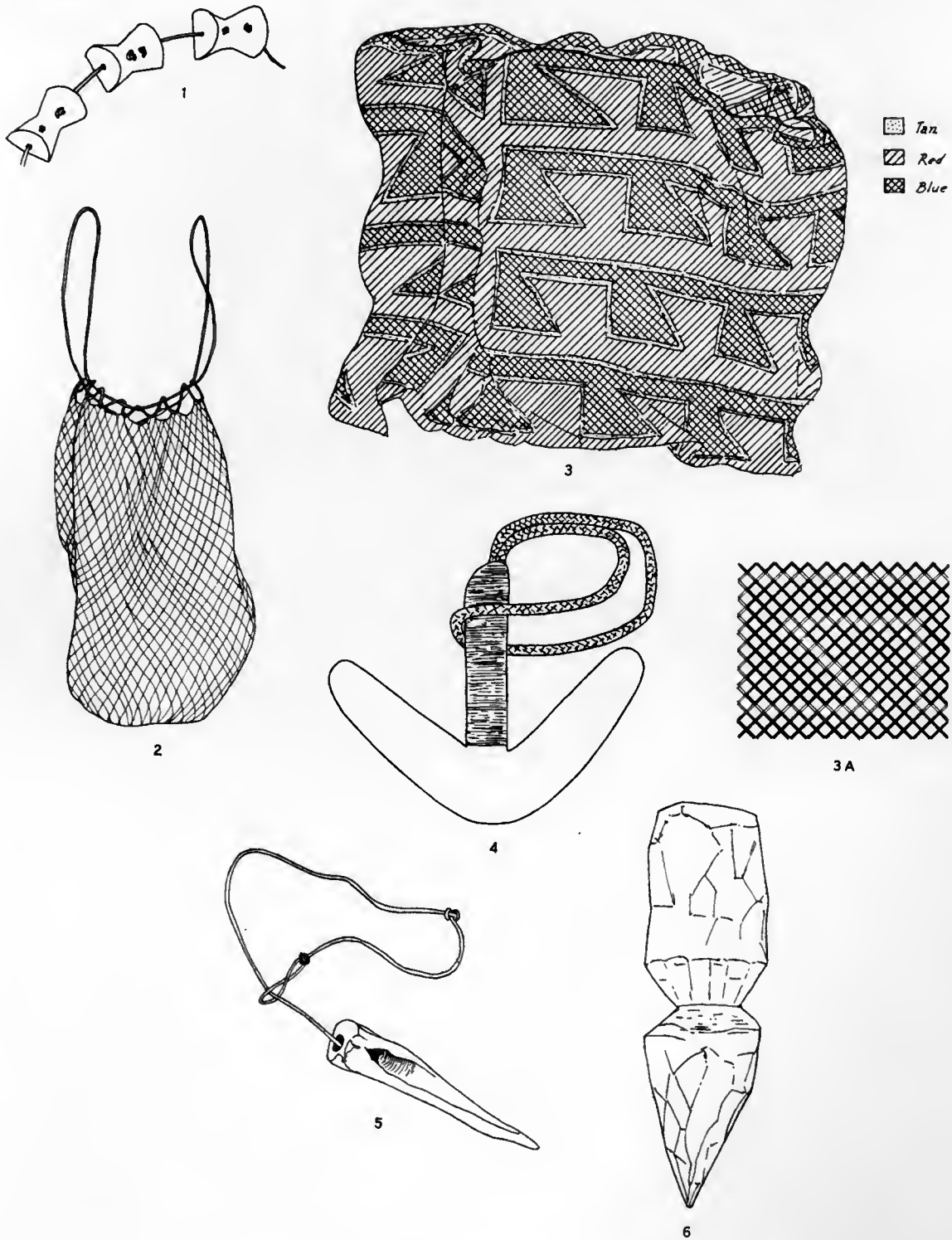


LATE CAÑETE CLOTH, BALANCE, CARVING, AND FIGURINES



OBJECTS FROM A LATE CAÑETE CACHE BURIED AT CERRO AZUL

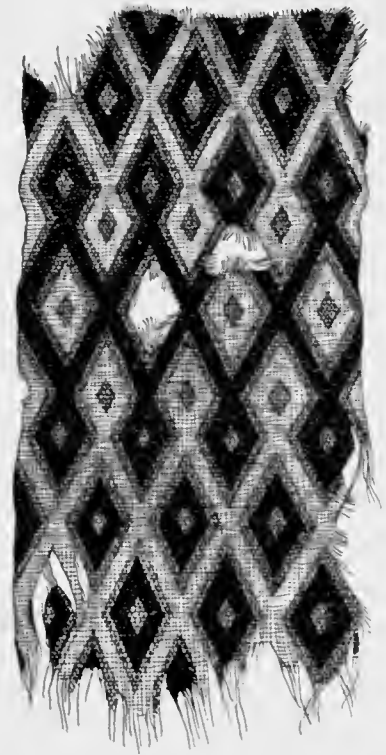




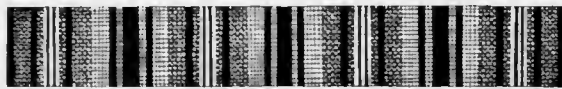
OBJECTS FROM A LATE CAÑETE CACHE BURIED AT CERRO AZUL



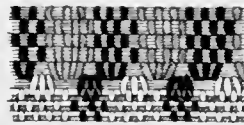
1



2



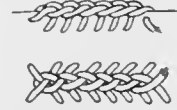
■ Rose ■ Golden Brown ■ Brown ■ Blue and Brown Alternating ■ Brown and Golden Brown Alternating



1A



2A

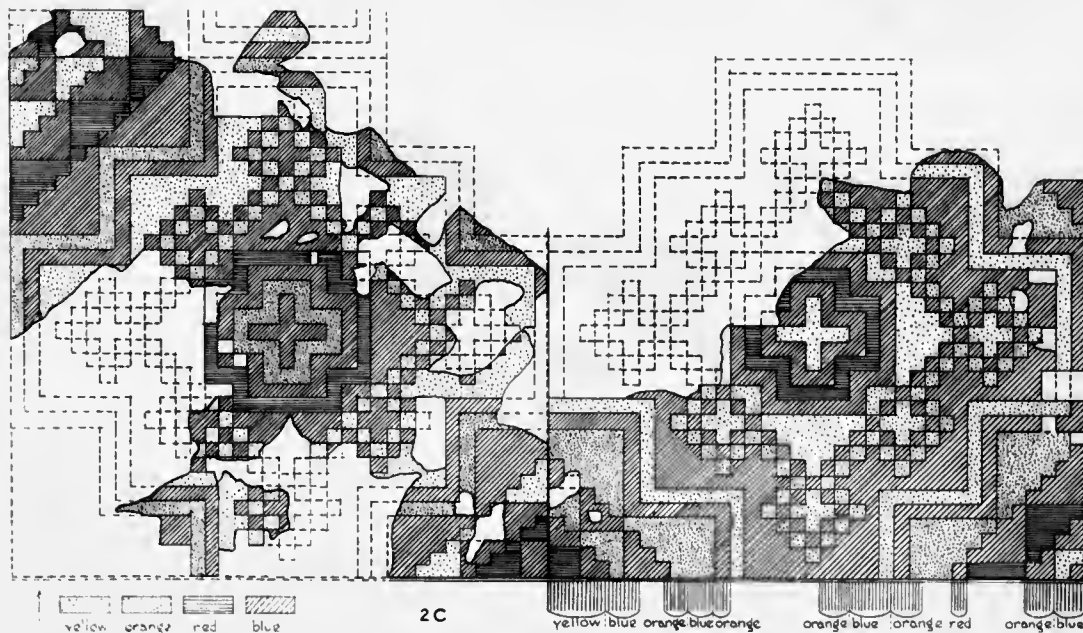
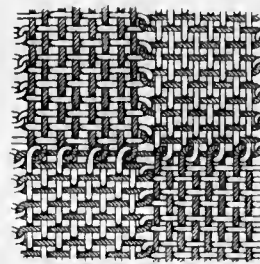
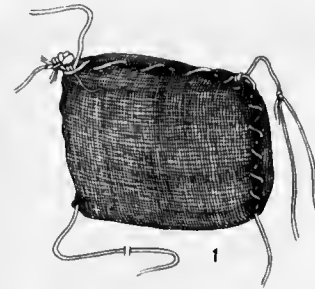


3

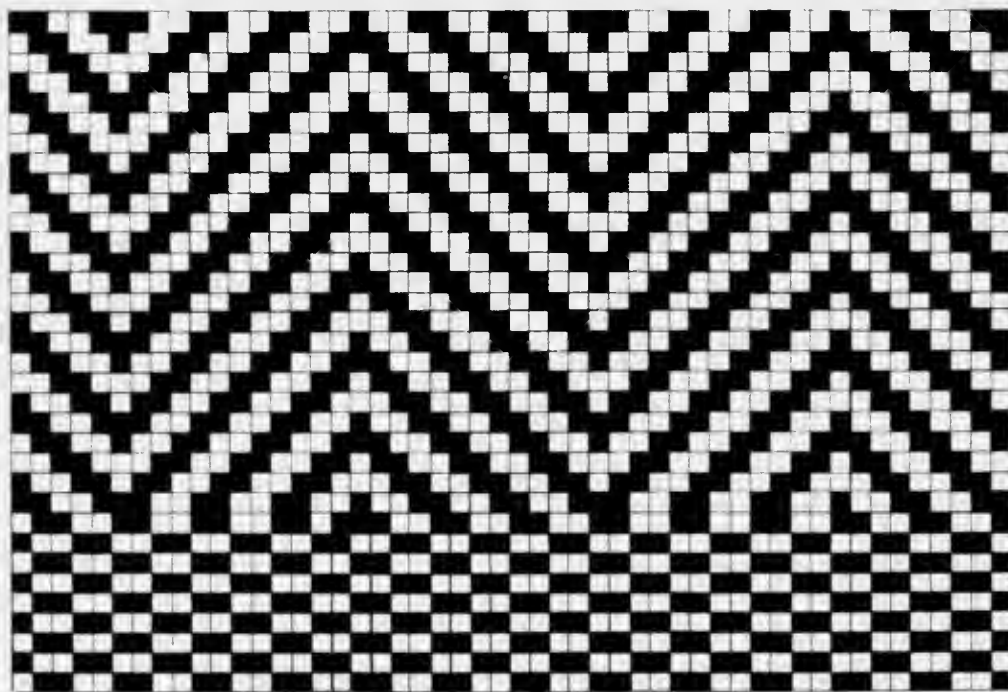
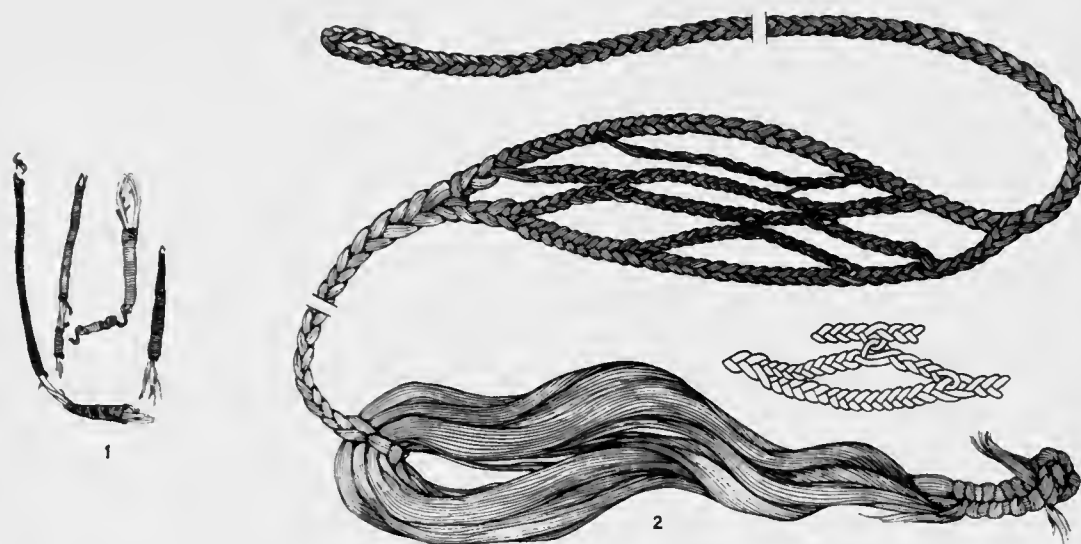


4

MIDDLE CAÑETE TEXTILES FROM CERRO DEL ORO



MIDDLE CAÑETE TEXTILES FROM CERRO DEL ORO



3

MIDDLE CAÑETE TEXTILES FROM CERRO DEL ORO













